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In adverting to the kindness in relation to this point, which I have experienced at the hands of friends, I feel myself called upon to single out, especially, some few of such sources, and to take this opportunity of thanking them publicly. Amongst my most liberal contributors, from a very early period, have been the Medical Officers of St. Bartholomew's Hospital, of whom I may especially enumerate Mr. Abernethy, Mr. Lawrence, Mr. Earle, and Mr. Stanley. To my old friend and pupil, Mr. Barlow, of Writtle, Essex, I feel particularly indebted for the interest and persevering energy which he has ever displayed in procuring for me every pathological subject which has fallen within his reach; and through the kindness of another old friend, Captain Warren, I have been enabled to form a very extensive collection of

specimens in Zoology and Comparative Anatomy, particularly of the animals of Barbice. I must also offer my warmest acknowledgments to Mr. Kingdon, Mr. Macilwain, Mr. Carwardine, Mr. Wray, Mr. Semple, Mr. Hands, Mr. Wilson, Mr. William Barlow, Mr. N. Barlow, and to the memory of my late excellent friends, Dr. Thomas Davies and Mr. Snow. It is, however, with much regret that I take leave of this part of my subject, since I find that, from want of space, I must necessarily omit the names of a very long list of kind friends and contributors, whom I must beg to accept my silent thanks, with the assurance that my gratitude is not the less felt, because it finds no representative in words.

The preparations themselves have been put up at great cost, and at a considerable sacrifice of time, since every specimen was prepared with my own hands, and many which had become turbid in the course of years, have been restored.

I had long entertained the hope that my collection might be preserved entire, through the liberality of some of the many important medical institutions of this enlightened country, but that hope has long since been dissipated; and I was induced, some years since, I must confess with much reluctance, to part with certain portions; and more recently I have yielded rather to the importunity of friends than to my own wishes, in offering for sale, by public auction, the remainder.

Of the preparations removed from my collection, two hundred and fifty seven, illustrative of morbid and comparative structure, were purchased by the Council of the College of Surgeons of London, for the Hunterian Museum; one hundred and seventeen were added to the Anatomical Museum of the Leeds Medical School, a considerable number were transferred to the Anatomical Collection of the Alders-

gate Street Medical School ; and some few were purchased by Dr. Grant, of University College.

Of all the preparations which I have collected, I have preserved a careful description, which extends to the history of the case, the medical treatment with its results, collateral circumstances of importance, and to the pathological appearances observed on the post-mortem examination. This history occupies ten thick folio volumes, and is too bulky for publication in entire. The present catalogue is a brief abstract of those volumes, and I fear that in some instances it may be urged against me, that still greater brevity might have been observed with advantage. In this, however, I must claim the indulgence of my readers, and beg of them to regard with clemency the interest with which a collector always views the circumstances attending upon his acquisitions.

The arrangement of the subjects of the catalogue I have left to my friend and old pupil, Mr. ERASMUS WILSON, of the Middlesex Hospital, who, in addition to his other numerous avocations, has kindly undertaken to revise the proof sheets, and to superintend the work during its progress through the press. The order which he has pursued is physiological, and in two additional chapters, such preparations have been assembled under the designation of "Miscellaneous," as, from the great extent of the collection, and the limited space which my house affords, had escaped observation during the classification of the rest.

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SECTION I.

OSSEOUS SYSTEM.

Normal.

- 1 Skeleton of a Negro. The arms in this variety of the human species are remarkable for their great length. The height of this skeleton is five feet seven inches and a half; the length of the humerus twelve inches and three quarters, and of the ulna eleven inches and a half. These peculiarities will be found described in BLUMENBACH'S Comparative Anatomy, and in the Work of Mr. LAWRENCE on Comparative Anatomy, &c. page 406.
- 2 Skeleton of a fœtus, at the full period of utero-gestation.
- 3 Skeleton of a fœtus, at the full period.
- 4 Cranium of an adult.
- 5 Ditto.
- 6 Ditto.
- 7 Ditto.
- 8 Ditto.
- 9 Ditto.
- 10 Ditto.
- 11 Ditto.
- 12 Ditto.
- 13 Ditto.
- 14 Ditto.
- 15 Ditto.
- 16 Ditto.
- 17 Ditto.
- 18 Ditto.
- 19 Ditto.
- 20 Ditto.
- 21 Ditto.
- 22 Ditto.
- 23 Ditto.
- 24 Ditto.
- 25 Ditto.

- 26 Cranium of an adult female.
- 27 Cranium of an adult; the frontal sinuses remarkably developed.
- 28 Cranium of an adult; frontal sinuses remarkably projecting.
- 29 An ugly misshapen skull; the frontal sinuses large, and prominent.
- 30 Cranium of an adult; frontal sinuses very prominent.
- 31 Cranium of an adult; frontal sinuses large and prominent.
- 32 Cranium of an adult; frontal sinuses remarkably prominent.
- 33 Cranium of an adult; the styloid processes are very long.
- 34 Cranium of an adult; the frontal bone is ill developed, and resembles that of the Carib. The alveolar processes of the superior maxillary bones are thickened by exostoses.
- 35 Cranium of an adult female; the skull is irregularly formed, and the palatine arch very narrow.
- 36 Cranium of an adult; the phrenological region of destructiveness is remarkably large on the right side. The alveolar processes absorbed.
- 37 Cranium of an adult; the frontal bone is well developed, and traversed by the frontal suture.
- 38 Cranium of an adult; the frontal sinuses are very large, and the frontal bone traversed by a median suture.
- 39 Cranium of an adult; frontal sinuses prominent. The frontal suture divides the lateral portions of the frontal bone.
- 40 A well developed skull; with large and prominent malar bones,—probably that of a Scotchman.
- 41 Cranium of an adult Frenchman.
- 42 Cranium of an adult Frenchman; the frontal sinuses are large, and the skull well developed.
- 43 Cranium of an adult Lascar. The skull presents a rounded form, and resembles that of the Turk; which is supposed to obtain this peculiar figure from the use of the turban. The superior maxillary bones are projecting, and the malar bones large and prominent.
- 44 Cranium of a woman born deaf and dumb. The appearance of this skull is very remarkable.
A cast of the head and face will be found among the different casts, &c.
- 45 Cranium of a felon, executed for the attempted murder of an old man.

- 46 Cranium of an adult of an ebony black color ; the teeth partook of the same color with the bones ; the frontal suture traverses the frontal bone.
This skull was found, with several other bones and numerous coins, beneath the present foundation of London Bridge, in excavating the bed of the River Thames. All the bones were discolored.
- 47 The head of a woman, having the integuments and soft parts converted into adipocire.
Her body was found in a burial ground, without a coffin, the ear-rings still remaining in her ears ; she is supposed to have been murdered.
- 48 Pelvis of a boy, four years of age, showing the divisions of the ossa innominata.
- 49 Pelvis of a boy, fourteen years of age ; the division of the ossa innominata, and the ligaments are shown.
- 50 An adult pelvis, with the ligaments. Three of the lumbar vertebræ are shown, and the head and neck of the right femur.
- 51 Pelvis of a female (adult), with the ligaments, and three of the lumbar vertebræ, the heads and necks of the thigh bones shown.
- 52 A female pelvis, with the ligaments ; two of the lumbar vertebræ, and the superior parts of the thigh bones are shown.
- 53 A beautiful pelvis, from an adult male.
- 54 Pelvis of an adult female.
- 55 A pelvis, with the ligaments (adult.)
- 56 A female (adult) pelvis.
- 57 Pelvis of a very old person. The sacrum is completely ankylosed with the connecting surfaces of the ossa innominata ; the anterior surfaces of some of the bodies of the dorsal and lumbar vertebræ are united by osseous matter, and the spinous processes of the lumbar vertebræ.
- 58 A pelvis of an old subject, with some of the dorsal and lumbar vertebræ.

SECTION II.

Abnormal.

- 59 Spina bifida in the lumbar region, formed by arrest in the development of the arches of the two last lumbar vertebræ and all the pieces of the sacrum. A section of the preparation is made in order to show the spinal canal, its membranes, and some of the nerves of the cauda equina. The tumor was as large as an apple of moderate size; its integument was thinned and partially absorbed near the centre, and permitted the protrusion of a portion of highly inflamed theca vertebralis.

After birth the swelling increased in bulk, although partly relieved by serous exudation; it gave rise to much pain, produced convulsions, and destroyed the infant on the fifth day. Upon examination, the arachnoid and pia mater were much inflamed throughout their entire extent; and there was a considerable quantity of fluid in the ventricles of the brain. This preparation is engraved in Mr. CROWTHER'S Work on Scrofula.

- 60 Spina bifida in a fœtus. There is a deficiency in the arches of the lumbar vertebræ and all those belonging to the sacrum. From a child still-born, affected with hydrocephalus. The labor was extremely difficult; the child weighed eight pounds and three quarters, avoirdupoise; the mother only twenty years of age, and the first child. I inspected the body. The bones of the cranium were much larger and more extensively ossified than is generally observed at such an early period, they were also widely separated. The frontal bones were two inches and a quarter apart, and the anterior fontanel three inches and a quarter in diameter. The pia mater was inflamed, and all the vessels of the brain were surcharged with blood. The brain was too much softened by the contained fluid, to admit

of an accurate examination of its structure. One hemisphere of the cerebrum was punctured, and the whole quantity of fluid which escaped measured fourteen ounces.

On dissection, it appeared that all the ventricles of the brain had been dilated into one large cavity; and there was a free communication between this and the membranes of the medulla spinalis; a considerable quantity of fluid was also found between these membranes. The tumor of the spina bifida was about the size of a large orange; a considerable part of the integuments on the centre of the enlargement had been absorbed, and the theca vertebralis protruded, which was highly inflamed; these appearances are seen in the preparation. The tumor contained limpid fluid; its internal surface was highly inflamed; and the cauda equina branched out on this surface in various directions; whilst the sacral nerves were distributed, and passed through their foramina in regular order; this arrangement is well seen in the preparation. The lungs were healthy; the ventricle of the heart undivided by a septum ventriculorum; the ductus arteriosus extremely large, also the foramen ovale; the auricles very capacious. The left vertebral artery had its origin from the arch of the aorta. The abdominal viscera were healthy. Had it been ascertained during labor, that the child was affected with hydrocephalus, it would have been advisable to have punctured the brain to let out the fluid, in which case the parturition would have been less difficult and tedious.

SECTION III.

Pathological.

- 61 Skeleton of a life-guards man. The anterior surface of several of the bodies of the vertebræ are affected with exostoses ; which in time would have produced anchylosis.
- 62 Skeleton of an adult female. The external surface of the bones of the cranium, and those belonging to the thighs and legs, show the dreadful effects of syphilis, and the abuse of mercury.
- 63 Cranium of an adult. The shape round ; the os frontis immensely large, and the fore-head well developed. The sagittal and lambdoidal sutures are nearly obliterated. On the left side of the skull, a portion of the parietal, temporal, and sphenoid bones present a rounded appearance, very different from the opposite side ; and there is a slight crack or fissure of the external table, extending from the base of the zygoma, across the parietal bone : whether this was produced by accident or not, I cannot say, not having the history of the case.
- 64 Cranium of an adult. The forehead is low, the sides of the skull very flat, and the frontal sinuses very prominent as in the Negro. On the right side of the frontal bone, about a quarter of an inch from the supra-orbital fissure for the blood-vessels, there is a slight fracture of the external table, with depression ; and a little beyond this part, the bone appears to have been destroyed by ulceration. The bones of the nose are considerably inclined to the left side, producing a very curious appearance ; yet they are not separated from their sutures.

The history of this case is not known ; probably the morbid changes in the frontal bones, were occasioned by accident ; and the unnatural appearance of the bones of the nose congenital.

65 A portion of the left parietal bone, with an indentation on its external surface near its posterior inferior angle, the effects of an injury at some remote period; the internal table of this bone, corresponding with the indentation on the external surface, protrudes considerably, and must have pressed on the dura mater and brain. The structure of the bone is very solid, and the parietes thick. The history of the case is not known.

66 A portion of the calvarium, including a part of the os frontis, and of the parietal bones; the arteries of the scalp are injected with wax, &c. On the convex surface of the frontal bone, and near to its posterior border, is an ulcerated opening of considerable size; produced by the destruction of both tables of the bone from syphilis. The morbid action had extended as far as the coronal suture, and two branches of the temporal artery are seen near the edges of the diseased bone.

On the internal surface of the bone, the disease had destroyed one of the branches of the meningeal artery; the dura mater was ulcerated, and the brain inflamed. There were other traces of syphilitic disease.

67 Calvarium. The whole of the external table of the frontal bone has been destroyed, apparently by ulceration, together with a part of the parietal bones, near the sagittal and coronal sutures. The ulcerated surface has subsequently been filled up with a deposit of very dense osseous substance, which presents the appearance of the cells of a honey-comb. The disease has also affected in a less degree, the inner table of the temporal bone, and parietal bones.

The rest of the bones are thick and heavy. This disease probably originated in some injury to the scalp.

68 Calvarium. A considerable portion of the superior part of the frontal bone, and portions of the parietal bones are destroyed by syphilis. The coronal and sagittal sutures are remarkably serrated.

Was the destruction of the osseous parts really the effect of venereal disease, or the imprudent use of mercury?

69 Calvarium. The external table of the frontal bone had been destroyed by ulceration; and osseous matter had

been deposited in irregular patches, presenting a very ragged appearance. But the greatest degree of mischief is seen at the posterior part of the parietal bones, where hard bony deposits have formed in the diplöe.

On the internal surface of the frontal bone, near the centre, there is a rounded protuberance; but apparently not connected with the disease. The sutures are nearly obliterated.

- 70 A portion of the central part of the left parietal bone, with the integuments, showing the effects of local injury. This preparation was removed from a man who had a fall from his horse; the integuments were lacerated to the extent of an inch; and there was considerable hæmorrhage from the wound. Symptoms of inflammation of the brain supervened, which could not be subdued; and he died. The arachnoid and pia mater were highly inflamed, as was the substance of the brain.

The pericranium and the bones of the calvarium were also inflamed, as is shown in the preparation.

- 71 A portion of the parietal bone of a man, showing immense thickness and great solidity, the diplöe is obliterated.

A small portion of the integuments, and of the pericranium are preserved; the rest were dissected off, to show the results of inflammation of the pericranium; viz. the secretion of pus and ulceration. This process had separated the periosteal membrane from the bone, portions of which had been absorbed. The diseased action had extended to the internal surface of the bone, and a considerable portion had been destroyed; the dura mater, arachnoid membrane, pia mater, and the brain, were highly inflamed.

This I consider to have been a case of acute otitis.

- 72 Calvarium. Showing the effects of syphilis in various parts of the outer table; there is a considerable depression of the bone at the superior and central portion of the os occipitis, occasioned by accident at some remote period.

The bones are extremely dense and solid, especially the occipital; the frontal sinuses are large, and all the sutures obliterated. On the right temporal bone there is an opening through both tables, caused by

ulcerative absorption ; and a portion of the groove for the meningeal artery is destroyed, as is seen in the preparation.

73 Calvarium. The external and internal tables are affected with syphilis.

74 A cranium, showing the effects of syphilis. The principal part of the anterior portion of the superior maxillary and turbinated bones, and the palatine arch, have been destroyed.

The destructive effects in this case, and in many others which I shall have occasion to describe, were, I have no doubt, principally caused by the improper use of mercury.

75 A cranium, showing the effects of syphilis on the outer surface of the calvarium ; the ossa nasi, and the left malar bone, &c. are also affected.

76 Cranium of a woman, the anterior part of the os frontis, and the right side of the ramus, are affected with syphilis.

77 Half of the cranium of a cow, on the right side of the skull, the bones are enormously expanded ; this enlargement was occasioned by a medullary tumor, which formed in the diplœe. The morbid growth had caused destruction of the integuments covering this part of the head, and had formed a bleeding fungus, which presented a very frightful appearance. It is singular that the internal table of the skull was not affected, nor were the membranes of the brain. The liver contained a great number of medullary tubera. The animal was greatly emaciated ; the muscular fibres very flaccid ; and the cellular tissue tinged with bile.

78 Inter-maxillary bones, with the permanent teeth in their alveoli ; from a child of a scrofulous diathesis. This exfoliation took place and the child died, from the imprudent use of mercury.

79 Inter-maxillary bones, with the incisor teeth of an adult. Necrosis and caries were produced in this case by the injudicious use of mercury, for a remedy for what has been denominated "pseudo-syphilis." The patient's life was for some time in a precarious state.

Some anatomists have asserted that the sutures of the inter-maxillary bones always become obliterated in adult age ; this change however does not invariably take place, as I can prove by reference to crania in my

collection ; and they are not defaced in monkies. I have the cranium of a baboon, showing this fact, there is besides great expansion of the upper and lower maxillæ, with caries of the external surface of the skull, and exfoliation of the inter-maxillary bones, with both the temporary and permanent teeth. The animal died during dentition ; the fate of many of the monkey tribe in this country. The bones were found on dissection to be remarkably soft ; and the lungs, liver, and spleen, contained numerous scrofulous tubercles.

- 80 A portion of the inferior maxillary bone, from a boy six years of age, exfoliated through the effects of mercury. Several of the deciduous teeth came away ; some of the permanent are seen in their alveoli. The patient died some time after of phthisis pulmonalis.
- 81 A sequestrum from the inferior maxillary bone. This preparation was removed by the aid of the forceps, from the jaw of the late Mr. Joseph Grimaldi, the celebrated clown. He received a severe blow on the right side of the lower jaw ; an abscess formed in the gums, and suppurated ; the molar teeth on the affected side became loosened, and it was found necessary to extract them. Spiculæ of bone were afterwards removed by the forceps, and several fragments exfoliated spontaneously. I soon discovered that there was a complete separation of a portion of the maxilla, at about half an inch from its angle. The patient's health was very seriously disordered by the pain and misery he had experienced for several months. Some time after the removal of the carious bones, the gum closed, and his health began to improve ; but he was unable to eat solid food, and was obliged to live on broth, milk, and other nourishing liquids.
- 82 A portion of the inferior jaw-bone of an ox, greatly expanded, and immensely thickened ; occasioned by a medullary tumor in the cancellous structure. The liver was likewise affected with the same disease.
- 83 A portion of the inferior jaw-bone of a bullock ; the cancelli enlarged, very dense in structure, and the external parietes greatly expanded by abscess which formed within the jaw, and loosened three of the teeth.
- 84 The anterior portion of the lower jaw-bone of a horse.

The right side fractured, and not united by bone. A great quantity of osseous matter had been deposited near the fractured part, and to a considerable distance around it; and there are several large excavations in the bones. These changes had been produced by inflammation and abscesses.

- 85 The vertebral column, with the cranium attached, showing spinal curvature. From a woman fifty years of age; the history of the case is not known. The curvature is partly angular and lateral, it had been occasioned by a morbid state of the intervertebral substances, and probably of the ligaments, the bones being perfectly healthy. The bodies of the first, second, and third dorsal vertebræ, protrude into the thorax; the cervical vertebræ are perpendicular; the greatest extent of angular projection is formed by the fourth, fifth, and sixth dorsal vertebræ, and ankylosis has taken place between their transverse processes, and between the anterior portions of their bodies. These important provisions of nature are frequently noticed, where partial destruction has taken place in vertebræ not affected with scrofula, but from the effects of ostitis.
- 86 Angular curvature of the spine, in a very old man; the concavity of the curve being inclined forwards. The osseous structure of the bodies of the vertebræ quite healthy; but in consequence of some morbid change of structure in the intervertebral substances, or from pressure occasioned by the superincumbent weight of the head, they have been compressed, and nearly destroyed, especially in the cervical and dorsal regions of the spine. Exostosis of the anterior surfaces of the bodies is seen uniting the first and second lumbar vertebræ.
- 87 Diseased spine. The intervertebral substances of the cervical, and six of the dorsal vertebræ have been nearly absorbed, as well as a considerable portion of the anterior surfaces of the bodies. The remaining vertebræ are affected with scrofula. The preparation is in the museum of the Royal College of Surgeons.
- 88 Part of the spine of a child, 2 years of age, affected with angular curvature, and showing the destructive effects of scrofula. Some of the bodies of the cervical vertebræ, as well as those of the dorsal, have been destroyed.

The theca vertebralis was exposed ; it was highly inflamed, and the inflammatory action had extended to the membranes of the brain ; there was a considerable quantity of fluid in the ventricles, which caused death. The bones of the vertebræ were very much inflamed ; as were the arch of the aorta, and the pulmonary artery.

There was a considerable quantity of fluid between the arachnoid membrane, and the pia mater ; and nearly four ounces of fluid in the ventricles. The lungs were filled with miliary tubercles. Similar depositions were found in the spleen, and mesenteric glands ; and the mucous glands in the small intestines were greatly enlarged. The mother of the child was scrofulous. This is an interesting specimen.

- 89 A scrofulous spine, with an angular curvature. The disease had commenced in the bodies of the three upper dorsal vertebræ, and has destroyed nearly the whole of their anterior surfaces. The theca vertebralis, and medulla spinalis became inflamed, and the inflammation extending to the brain, caused death. The rest of the bodies of the vertebræ were inflamed and contained scrofulous matter, and their structure was very soft. There were scrofulous tubercles in the lungs.
- 90 A diseased spine, with an angular curvature. Three of the bodies of the dorsal vertebræ have been destroyed by ulceration, together with the intervertebral substances ; and it is very remarkable, that there had been an attempt to produce anchylosis between the approximating surfaces of two of the vertebræ. This effort of nature has been interrupted in being carried fully into effect, by fragments of the diseased bone compressing the theca vertebralis, and medulla spinalis, and giving rise to inflammation ; the brain subsequently became affected, and the patient died. The rest of the vertebræ were soft, and caseous ; the lungs contained scrofulous tubercles ; the mesenteric glands were converted into tuberculous substance, and the mucous glands in the small intestines were enlarged.
- 91 A diseased spine, showing considerable angular curvature. Some of the bodies and intervertebral substances of the cervical and dorsal vertebræ have been destroyed by ulceration, and perfect anchylosis has been effected ; the spinal canal, near the angular projection, is greatly

diminished, as is well shown in the specimen. The history of this case is not known.

- 92 A remarkable specimen of angular curvature of the spine, from a boy 12 years of age. He had, from an early period of his life, been afflicted with rachitis; was remarkably delicate, diminutive in size, and greatly deformed; but his mental capacity was surprisingly active. The deformity was caused by an acute angular curvature in the upper dorsal vertebræ; which had elevated the scapulæ as high as the occiput. The thorax was contracted, and elevated, and the chin rested on the sternum, so that he had no appearance of a neck.

About four months previous to his death, symptoms of diseased liver occurred, his digestive organs were greatly disordered, his health declined, the secretion from the kidneys diminished, and jaundice supervened. Every endeavour was used to check the progress of the disease, but ineffectually; he complained of great pain in the region of the left lobe of the liver, and this viscus protruded considerably beyond the margin of the ribs. Ascites came on, accompanied with œdema of the inferior extremities, and he had such great difficulty of breathing, that I thought it right to perform paracentesis abdominis.

He was much relieved by the operation; but in the course of six weeks fluid again accumulated, and it was necessary to repeat it; after which he gradually sank, and died.

Inspectio Cadaveris.—Although the head was disproportionably large as compared with his body, there was no appearance of disease in the brain, or of its membranes; and I never examined a brain more beautifully developed. The contents of the thorax seemed too large for their cavities, for the heart and part of the lungs protruded to a considerable distance as soon as the sternum was removed. The heart was large, but healthy. The lungs were greatly distended with air, infiltrated with a serous fluid, and in some parts hepatised; there were no signs of tubercles. The liver was of enormous size, and nearly filled the abdomen; it was of a pale yellow color, but appeared healthy in structure. The gall-bladder was distended with an orange colored secretion; the spleen was

large, but not diseased; and the mesenteric glands were healthy. In consequence of the deformity of the spine, the capacity of the thorax was greatly diminished; and the ribs were distorted. These causes had, no doubt, occasioned the difficulty of breathing the patient experienced; and with such impediments, it is wonderful how the functions of the thoracic viscera were performed, and that more disease in them had not been produced.

The theca vertebralis and medulla spinalis were healthy; but the latter was very small. Six of the bodies of the dorsal vertebræ with the intervertebral substances had been destroyed, and solid anchylosis had been effected; this is seen in the preparation.

- 93 Section of a diseased spine, with a portion of the medulla spinalis. The disease implicates ten of the dorsal and four of the lumbar vertebræ.

A large dense sac, measuring ten inches in length, covered the anterior surface of the bodies of the diseased vertebræ; and contained a large collection of offensive pus. This sac when cut open seemed to have been filled with pus, which had been secreted beneath the periosteal coverings, and the ligamentous expansion of the bones; thus denuding the osseous parts. The external surface of the sac had been increased in density by the deposition and organisation of lymph. The anterior surfaces of the vertebræ were greatly reduced in substance by ulcerative absorption; and after the cessation of this action, nature seemed to have attempted a reparative process, by covering the roughened surfaces of the bones with lymph. The internal surface of the sac was also thickened by lymph, and there was a great accumulation of pus in the spinal canal, between the bones, and the external surface of the dura mater. On making a section of the vertebræ, it was seen, that ten of the bodies had been affected by the disease; and nearly all the intervertebral substances were absorbed; the bodies had consequently been brought in contact with each other, and were placed in such close adaptation, with the exception of the fourth dorsal, which was nearly destroyed, that one might have expected bony union would have been effected, if the diseased action had not been so extensive. And this idea is strengthened

by the fact, that anchylosis had taken place, between the surfaces of the third and fourth lumbar vertebræ at their anterior borders ; as seen in the preparation. The central parts of the divided bodies of the vertebræ do not possess the softening, or want of phosphate of lime, nor the deposition of caseous matter noticed in scrofula ; but are more solid in structure than natural.

The spinal marrow and its membranes were removed from the spinal canal, to give a better view of the state of the vertebræ. The medulla spinalis, and the cauda equina, together with the theca are shown in the preparation.

The external surface of the dura mater, and arachnoid membrane were thickened ; and the spinal marrow softened near the diseased vertebræ. I consider this to have been a case of *ostitis*, which gave rise to the formation of a lumbar abscess. The preparation was obtained from a man, 34 years of age (a tailor), who had suffered nearly four years, from symptoms of diseased spine, and *psoas* abscess. The brain eventually became affected, and he died. There were no signs of scrofulous tubercles in the lungs, and all the abdominal viscera were healthy. This is a valuable specimen.

- 94 Spine of a sheep with curvatures. The deformity is on the left side, and is formed by the dorsal vertebræ. It presents the appearance not only of a lateral, but also of an angular curve ; it seemed on examination, not to have been the result of accident, but of a morbid state of the ligaments of the spine, and of the intervertebral substances ; these parts being extremely soft. And this opinion is strengthened by finding some of the joints, particularly the knee, greatly distended with thickened synovial secretion, and the capsule thickly coated with lymph. See the knee joint, No. 259.

There was no softening of the bony structure of the vertebræ, but the two bodies which formed the angular curve were partly absorbed, in consequence of pressure, and their intervertebral substances removed. The spinous processes are bent downwards on the right side nearly to a level with the heads of the ribs ; and the ribs on this side are brought closely together, to accommodate the curvature on the left ; while the ribs of the left side are widely separated.

This is a very singular specimen.

- 95 A portion of the occipital bone, with the foramen magnum, and basilar process, together with three of the first cervical vertebræ ; from a child. The right half of the ring of the atlas is destroyed by ulceration, and the second vertebra dislocated ; so that the odontoid process occupies the foramen magnum. These bones are firmly ankylosed, as are the transverse processes of the second and third vertebræ. In the 13th volume of the Royal Medico-chirurgical Transactions, the history of this case is related, by Wm. Lawrence, Esq.
- “ At the age of five or seven, a child became the subject of an illness supposed to be hydrocephalus. After it had existed for some time, a swelling took place in the side of the neck, obviously containing fluid, and this slowly increased to a considerable magnitude, so that its contents must have amounted to several ounces. Pressure on this swelling affected the brain, producing a state of coma. It was supposed at this time that the fluid in the neck communicated with that suspected to exist in the ventricles of the brain. The child used to move the head cautiously and slowly, supporting it with the hands at the sides. After a long continuance the symptoms slowly subsided, and at last entirely disappeared, together with the swelling of the neck. At no period of the complaint was there any interruption or diminution of sensation or voluntary motion, and the recovery of health and activity was complete, the child being able to walk and run, and engage in the active sports suited to its age.”
- “ There was nothing to attract particular notice in the position of the head. After some time had elapsed, disease came on in the lumbar vertebræ, attended with bending forwards of the spine and the formation of a large lumbar abscess. In consequence of this affection the child died at the age of twelve.”
- “ Examination. The head was examined during the hottest part of last summer, and the brain had become so soft, that the changes produced in it by disease could not be ascertained. Mr. Wigan brought to me the base of the skull, in which we were surprised at observing a considerable bony prominence standing up in the right side and front of the foramen magnum. The projection in question was smoothly covered by the dura mater, and it was soon apparent that it must

be the dentiform process of the second vertebra. When the soft parts had been completely removed by maceration, I found an extensive displacement of the occiput, atlas, and axis, and a firm consolidation of these bones in their new relative positions by the complete bony ankylosis of several articulations. The atlas is partially dislocated towards the left, and at the same time thrown a little forwards and upwards; hence the right and posterior part of its bony ring intercepts a considerable portion of the spinal canal."

"The middle anterior protuberance now corresponds to the left side of the basilar process; the extremity of the left transverse process projects three quarters of an inch beyond those of the two following vertebræ, while the right transverse processes of those vertebræ project one quarter of an inch beyond the corresponding one of the atlas. A considerable part of the right side of this bone has been destroyed by absorption: that is, the surfaces by which it is articulated to the occiput and atlas, a part of the transverse process, and that groove on which the right vertebral artery rested. The axis is completely dislocated from the atlas and occiput to the right, so that its left portion intercepts about one third of the spinal canal, and the dentiform process projects by its whole length, into the cavity of the skull at the anterior part of the foramen magnum, close to the right anterior condyloid foramen. In the natural position of the parts, the apex of this process is a little below the level of the occipito-atlantal articulation; here it is an inch above the same level, while its projection into the cavity of the skull is between five and six eighths of an inch. The lateral displacement is no less extensive; the measurement from the left anterior condyloid foramen to the middle of the basis of the dentiform process being seven eighths of an inch, while the distance from the right foramen to the same point is only two eighths. We cannot but be astonished at finding, that the immediate pressure of this bony projection on the under surface of the medulla oblongata caused no paralytic affection, even when we allow for the very gradual manner in which it must have taken place. The course of the right lingual nerve and vertebral artery must have been greatly altered."

- “The bodies of the second and third vertebræ are displaced towards the right, so that a line drawn along their middle and continued upwards, would strike the right margin of the basilar process; and the small tubercle on the anterior arch of the atlas corresponds to the left side of those bodies. The right occipital condyle, the remains of the right transverse process of the atlas, the inferior articular plane of the axis, and the right side of the basis of the dentiform process, are anchylosed; so as to form one solid bony mass. The left occipital condyle is partially anchylosed with the atlas; the left articular plane of the axis, its transverse process, and that of the third vertebra, are all consolidated with the partial anchylosis just mentioned.”
- “The articular processes of the axis and the third vertebra are anchylosed, the union extending on the left side as far as the bases of the spinous processes. The bodies of the axis and third vertebra are not anchylosed. The preternatural bony connexions just enumerated are perfect, equalling in solidity the natural bony structure, so that the limits of the anchylosed bones are confounded. The bony texture is quite natural; there is no roughness of surface, no diminution of solidity, nor any appearance of caries. The dimensions of the vertebral canal at its commencement are greatly reduced by the extensive displacement of the atlas and axis.”
- “The antero-posterior diameter of the foramen magnum is in this case one inch and a half; the greatest measurement from side to side is one inch and a quarter. The diameter of the ring of the third vertebra, from side to side, is seven eighths of an inch, from front to back, six eighths. The measurement of the canal, between the displaced portions of the atlas and axis is half an inch from before backwards, and five eighths of an inch from side to side.”
- This valuable preparation was presented to me, by William Lawrence, Esq. On examining the three cervical vertebræ, I found the osseous structure natural, and there were no signs of the bones having been affected with scrofula.
- In the history of the post-mortem examination, it is not stated, whether the bodies of the vertebræ in the situation of the lumbar abscess were altered in structure,

as in scrofula; nor is there any description of the state of the thoracic, or abdominal viscera; so that it is difficult to account for the cause of the abscesses. When a psoas abscess is excited by a scrofulous affection of the vertebræ, few cases terminate favorably. That an abscess might form in the lumbar region, from various causes, without the patient being of a strumous habit, the following case will prove. Mr. ———, 20 years of age, a medical student in Dublin, on climbing over a high gate, fell on the ground, and bruised his back considerably; but he soon recovered from the effects of the injury. About three months from the time of the accident, he experienced pain in the loins; and an enlargement of the right side of the spine, in the situation of the inferior dorsal vertebræ appeared, which gradually increased. The patient was under the care of an eminent surgeon, and every endeavour had been employed to disperse the enlargement, but without success. The tumefaction increased, and in the course of twelve months it had acquired an immense size; fluctuation was detected, and the case was considered a lumbar abscess. The health of the patient became affected; a consultation was held as to the propriety of puncturing the abscess, the opinion was, that such an operation was not advisable. After this, the brother of the patient, a surgeon, advised his coming to London. He was seen by several distinguished surgeons; all were of opinion that it was a psoas abscess, and they did not recommend its being opened. I was requested to see him; I examined carefully the course of the spine, there was not the least sign of a curvature; nor of any pain in moving it; and when pressure, and percussion were employed along the spinous processes, he did not feel the least uneasiness.

The patient informed me that he had been troubled for some time with profuse morning perspirations; and after dinner his face became flushed. I employed the stethoscope, also percussion, but could not detect any sign of organic lesion of the lungs. He was a very muscular fine-looking man, there were no signs of emaciation, and his animal spirits very good. I imagined that the hectic symptoms were occasioned by the large accumulation of pus; and I did not think the bones of the vertebræ were diseased; nor were there

any signs of scrofula in any part of his body ; which induced me to propose letting out the matter, which was readily sanctioned by the patient and his brother. A large wash-hand basin full of pure pus was discharged ; and a considerable quantity continued to flow from the aperture ; the hectic symptoms gradually disappeared, and his health improved. In about six weeks the wound closed ; a fresh collection of pus formed, and it was necessary again to let out the fluid, which was considerably less in quantity than in the first operation.

The discharge was very profuse for a length of time ; the opening closed ; after this straps of soap plaster were applied, and a bandage round the waist ; this plan was pursued for several months ; the secretion of pus ceased, and the patient recovered. But what is very singular in this case, an enlargement appeared beneath the left clavicle, which increased in size, although the unguentum hydirodatis potassæ, &c. had been employed. Fluctuation was felt ; the part was punctured, and a large quantity of matter flowed, the aperture after a time closed, a fresh collection of pus formed, and it was necessary to make another opening ; after this all went on favorably. This was a circumscribed abscess, as was the one in the loins.

- 96 The three first cervical vertebræ. From a gentleman who was thrown from a horse and pitched upon his head, which occasioned death. On inspection, a considerable quantity of blood was found effused into the cellular tissue beneath the muscles at the nape of the neck, the posterior segment of the ring of the atlas was completely fractured, and the theca vertebralis and medulla spinalis, with the two vertebral arteries, lacerated.

The transverse ligament which retains the odontoid process of the second vertebra, is preserved in the preparation, to show that it was not injured by the accident, nor was there any displacement of the articulating surfaces of the two vertebræ, which from such violent injury might have been anticipated.

- 97 Section of a dorsal vertebra, showing inflammation, and deposition of dense bone in the cancellous structure.
- 98 Fracture of one of the dorsal vertebræ through its body, and two of the spinous processes, which occasioned pressure on the spinal marrow. The lower extremities

were paralysed; the urine and fæces were voided involuntarily, and the man lived only 48 hours after the accident.

- 99 A fracture of the body of one of the dorsal vertebræ, which occasioned inflammation of the theca vertebralis. The man lived 12 days after the accident.
- 100 A fracture of three of the spinous and transverse processes of the dorsal vertebræ, and of one of the bodies, which had lacerated the theca vertebralis and medulla spinalis and occasioned immediate death. A portion of the vena cava is shown in the preparation.
- 101 A fracture of one of the dorsal vertebræ, which caused immediate death. A portion of the theca vertebralis and medulla spinalis is shown in the specimen.
- 102 Two dorsal vertebræ of a horse. Anchylosis had been effected between two of these vertebræ on the inner surface; the osseous deposit must have compressed the intervertebral substance considerably, which is seen in the specimen; one of the transverse processes projects beneath the other.
- 103 Fracture of the spinous processes of two of the lumbar vertebræ, and of the body of one; the theca vertebralis, and medulla spinalis were lacerated, producing immediate death.
- 104 The inferior part of the spine, with the sacrum. From a boy 10 years of age, who from his birth had symptoms denoting tubercular disease of the lungs. About eight months previous to his death, he began to complain of pain in his back, between the inferior dorsal and lumbar vertebræ. He was kept in bed, and every endeavour made to check the progress of the disease, without avail. The spinous processes began to project, and a lumbar abscess formed, which ulcerated, and gave rise to a profuse discharge of scrofulous matter. At different times spiculæ of bone were discharged with the pus, from the abscess. The phthisical symptoms increased, and ultimately he became affected with colliquative diarrhœa, which produced death. *Inspectio cadaveris*.—The lungs were nearly filled with scrofulous tubercles, and vomicæ. The liver was very large, and of a pale color; most of the mesenteric glands were enlarged by caseous deposits: the mucous glands of the intestines were greatly increased in size, and many of

them ulcerated, particularly in the ileum and cæcum. All the vertebræ of the spine were in a softened state, and were easily cut through with a scalpel. From their extreme lightness, they would have possessed but a small quantity of phosphate of lime; and they seemed to be principally composed of the vascular parts of the bone, with caseous deposits in the cancelli. The ulcerative action in the bones was most evident in the two last dorsal, and the two first lumbar vertebræ, in which the spinous and transverse processes were completely destroyed. On the lateral surfaces of the first and second vertebræ, osseous matter had been deposited; as is seen in the preparation. The spinous processes having been destroyed, and the theca vertebralis protected only by the integuments; it became inflamed throughout its entire extent; and the dura mater, and pia mater of the brain were inflamed.

- 105 A portion of the spine of a boy, 14 years of age; nearly three of the lumbar vertebræ had been destroyed by scrofulous ulceration; which occasioned an angular curvature.

The patient died from the effects of inflammation of the theca vertebralis, and medulla spinalis.

- 106 The lumbar vertebræ, with the sacrum and a portion of the ilium.

Nearly three of the bodies of the vertebræ, with the intervertebral substances have been destroyed by scrofulous ulceration, which had occasioned a considerable angular curvature; the remaining fragments of the bones compressing the theca vertebralis, and medulla spinalis, excited inflammation, and produced paraplegia; the brain became afterwards affected, and the case terminated fatally.

- 107 Diseased lumbar vertebræ, sacrum, and medulla spinalis, from a boy 10 years of age, who had been afflicted with a diseased spine nearly five years, and had been in an hospital for several months. The disease existed in the lumbar vertebræ; a psoas abscess formed, and burst on the right side of the sacrum, close to the coccyx. When admitted into the sick ward of Cripplegate workhouse, there was an angular curvature of the lumbar vertebræ; the discharge from the opening was considerable; he was troubled with

cough, and difficulty of breathing ; and his digestive organs were disordered.

The discharge from the abscess continued as usual, and there were no unfavourable symptoms for nearly twelve months from the time of his admission, when he began to complain of pain in the spine, and head ; the pupils of the eyes became greatly contracted, and he was unable to support the rays of light. The pulse being full and hard, and the skin hot ; fourteen ounces of blood were drawn from the arm ; active purgatives, and saline medicines were exhibited, and as the evacuations were offensive, and of deep green color, mercury was prescribed. This plan of treatment for a time relieved the symptoms, but they recurred to a greater degree, and the same mode of treatment was repeated, but without the previous satisfactory results. The pupils of the eyes became greatly dilated, and there was occasionally strabismus ; convulsions came on, and he expired.

Inspectio cadaveris.—The arachnoid membrane and pia mater were highly inflamed ; and there was a considerable quantity of water between them ; the substance of the brain was also inflamed ; and there were upwards of four ounces of fluid in the ventricles. The lungs were greatly congested, and partly hepatised, but there were no signs of scrofulous tubercles ; the abdominal viscera were healthy.

The whole of theca vertebralis was highly inflamed ; but more evidently, near the diseased vertebræ, where coagulated lymph had been deposited, both on the internal and external surface. The medulla spinalis for some distance beyond the diseased bones was extremely soft ; and the remaining part was inflamed. The lumbar vertebræ and sacrum were removed, the bodies of the third and fourth lumbar vertebræ, and part of the fifth were found destroyed by ulceration. The base of the sacrum was also partly absorbed, and the periosteal covering of the whole of the concave surface denuded.

Although so much mischief had been going on for such a length of time, so close to the nerves passing through the foramina of the sacrum ; yet the theca covering these was merely coated with lymph, and the nerves appeared healthy. The two remaining

vertebræ did not possess that softened character noticed in scrofulous bones ; nor were there any signs of caseous deposits in the cancelli. As there were no signs of scrofula in any part of the body, I think all the morbid changes may be referred to ostitis, the theca vertebralis becoming ultimately inflamed. But it is most singular in this case, that the disease should have existed so long without any attempts being made by nature to produce anchylosis in the vertebræ ; which might have effected a cure.

- 108 Two of the last lumbar vertebræ, with the sacrum ; the extremity of the latter had been fractured by an accident.

From a man, 25 years of age. When admitted into Cripplegate workhouse, he appeared in good health ; but had all the signs of paraplegia. On questioning him, as to how the accident had been produced ; he said “ he had been many years in the Navy ; and that he had fallen from the main-top of a ship, upon the main deck ; and from that time had completely lost the use of his legs.” He was sent to Kingston Public Hospital, Jamaica, after the accident ; where he remained a considerable time without receiving any benefit. The surgeon of the hospital imagined the paralysis to be occasioned by a dislocation of the spine ; and signed a certificate to that effect ; and the man was sent home, and afterwards placed in Haslar hospital. Various plans of treatment had been extensively employed, without the least benefit. Abscesses formed near the loins, and the extremity of the sacrum, and burst ; and at different times spiculæ of bone had been discharged ; several of them were in his possession, which he gave to me. The patient also informed me, that for some time after the injury, his urine, and fæces passed involuntarily ; but he was gradually enabled to void them naturally. Whilst he was in the Workhouse, abscesses formed near the sacrum, anus, and perinæum ; they were opened, and several portions of dead bone were removed, which afforded him great relief. He continued in this miserable state for several months ; his health began to decline, and the digestive organs were disordered. Symptoms of inflammation of the theca vertebralis ensued, accompanied

with fever, the brain became affected; jaundice supervened, and he died suddenly. *Inspectio*.—The arachnoid membrane, and the pia mater were inflamed, and thickened, and pus had been secreted between them; the vessels of the brain were congested, and the brain inflamed; and there were nearly two ounces of water in the lateral ventricles. The lungs were gorged with blood, as were the auricles of the heart; but there were no signs of organic disease in these viscera.

The liver was large, and granulated; the gall-bladder contained a calculus, of the size of a nutmeg. The mucous glands of the small intestines were enlarged. The theca vertebralis was sphacelated, and the medulla spinalis was of a darkish hue, and softened. The sacral nerves were greatly diminished in size, flattened, and of a blackish color. The inferior portion of the sacrum was deprived of its covering, the left side of this bone was seen to have been fractured, and a considerable portion had been destroyed, extending nearly as far as the third foramen; and the os coccygis had been displaced. The asperities of the fracture had been absorbed, and a smooth surface produced; but on the concave side of the sacrum, the osseous deposits were very irregular. There was no appearance of dislocation in any portion of the spine. If the real nature of the accident had been detected at an early period, and the comminuted fragments of the bone removed by an operation, the man might probably have recovered. This is a very interesting case. See the theca vertebralis, and the biliary calculus.

- 109 Exostosis of considerable size between two of the vertebræ of a cod-fish. This is the only specimen of diseased bone I have ever seen in a fish.
- 110 A rib affected with necrosis.
- 111 Cartilage of a rib, perichondrium partly ossified.
- 112 A beautiful specimen of necrosis in the rib of a horse; some of the sequestra shown.
- 113 Rib of a horse affected with necrosis.
- 114 Rib of a horse affected with necrosis.
- 115 Rib of a horse, fractured, and united by ligament.
- 116 Fractured rib of a horse, which had not united.
- 117 Necrosis in the rib of a horse.

- 118 Two ribs of a horse which had been fractured, and united by very solid bone. There is also a large square portion of bone, extending between the intercostal spaces, close to the fractured parts; and the two ribs by this means are completely ankylosed.
- 119 Rib of a bullock fractured longitudinally to a considerable extent, and united firmly by bone.
- 120 Rib of a horse affected with necrosis.
- 121 Rib of a horse with a united fracture; there is also a long process of bone near the inferior edge of the rib, which is partially united to it by osseous matter.
- 122 Rib of a horse. At its external and anterior extremity there are two large irregular osseous growths; and the parietes of the rib are greatly expanded. A section shews the cancelli immensely developed, and the parietes of the rib extremely thin. The cells in the fresh state were filled with blood; the osseous growths on the external surface had been caused by periostitis.
- 123 Rib of an ox, with a comminuted fracture, which is united.
- 124 Rib of a horse, with large osseous growths, occasioned by an expanded state of the cancelli.
- 125 Caries in the sternum, from a man, 40 years of age; who died of phthisis pulmonalis. The internal surface of the trachea was completely destroyed by ulceration; the cricoid cartilage which had been converted into bone, was in a carious state, and a considerable portion of it had been destroyed. The patient occasionally coughed up fragments of bone, which were, no doubt, the separated portions of the cricoid. There were several large vomicae in the lungs, one of which had progressively made its way through the pleura pulmonalis, p. costalis, and the periosteal covering of the sternum; and had produced caries of that bone. An abscess formed beneath the integuments of the sternum, which burst, and there was a profuse discharge of pus, which lasted for a considerable time; and during the acts of coughing, air sometimes escaped. The ulcerated opening in the skin, which is of considerable size, is shown in the preparation; as well as the appearances of the diseased parts in their relative situation.

This was a very singular case.

- 126 The upper portion of the sternum. From a man, 82

years of age. The perichondrial covering of the two first ribs is converted into solid bone.

- 127 Sternum of a young man, who died of phthisis pulmonalis; the bones are very soft, and light, and the cancelli are filled with a caseous secretion. On the internal surface a portion of the bone has been absorbed in consequence of the existence of a large vomica in one of the lobes of the lung, near the surface of the pleura; union had taken place between this covering and the periosteum of the sternum; and ulceration of the parts was the consequence.
- 128 Scapula and radius, from a cyprian, who had lost the turbinated bones of the nose. Several other of her bones were affected with syphilis. The acromion is diseased, as is the end of the radius.
- 129 Scapula and humerus of a large bullock. From injury implicating the shoulder joint, all the soft parts and cartilaginous substances are destroyed; and the head of the humerus, and glenoid cavity are as highly eburnated as if polished by the lapidary. This appearance has been produced by walking, and is occasionally noticed in the joints of the human subject. Ossific matter is deposited in great abundance around the neck of the humerus, and scapula; which would in time have anchylosed the joint. A section of the head and neck of the humerus is made to show the cancellous structure.
- 130 A portion of the scapula of a horse, with an osseous tumor, which contained medullary matter in its centre.
- 131 Bones of the right arm of a boy, who died of phthisis pulmonalis; they are extremely small. The head of the humerus is greatly expanded, and all the soft parts, cartilages, ligaments, &c. had been destroyed by ulcerative absorption.
The same morbid changes had affected the elbow joint; and the carpal, and metacarpal bones were filled with caseous matter.
- 132 A fractured humerus which had not united. From an old woman, who was in an hospital for several months. She complained of pain in the arm whenever it was moved; and it continued painful till her death; which was occasioned by an affection of the brain. I dissected the arm, and found the humerus at its upper

portion in a comminuted state ; and the fractured bones deprived of their periosteal covering ; there were no signs of osseous union. The point of one of the fragments of bone had penetrated a part of the triceps, another the brachialis internus, and the musculo spiral nerve was implicated in the injury, which probably occasioned the severe pain which the patient experienced.

If the comminuted state of the fracture had been detected, and the absence of an attempt at union ; the woman's life might, possibly, have been saved by an amputation.

- 133 An oblique fracture of the os brachii, about three inches below its head, firmly united. A section of the bone shows the extent of the fractured ends, the line of union, and the cancelli of the head.

This is a beautiful specimen.

- 134 Stump of a humerus, the end of the bone is beautifully rounded off, and defended by osseous deposits.

The stump healed favorably, and the patient lived several years after the operation, without feeling any painful sensations.

- 135 Ulna ; its superior articulating surface is greatly enlarged and altered in figure, by exostosis ; the other parts of the natural structure had been destroyed by chronic ulceration, &c.

- 136 Ulna and radius, the superior articulating surface of the ulna affected with exostosis.

- 137 Ulna and radius, with an oblique fracture in the latter ; united.

- 138 Radius, its superior portion affected with syphilis.

- 139 Thumb of a man, which was amputated. The patient had a severe attack of osseous paronychia, which had been improperly treated at the commencement of the disease. After suffering agonising pain, the thumb, hand, and fore-arm became greatly swollen, and inflamed ; accompanied with pyrexia.

An accumulation of pus formed in the adjacent parts, and an abscess pointed and burst, a little above the origin of the nail. A black bristle is introduced into the opening. At this period I was requested to visit the patient ; the thumb was of immense size, and presented an unsightly appearance, and the integuments felt very dense. A probe was introduced into

the joint, and the bones were found denuded of their periosteum, and as there was no chance of curing the disease which was seriously disordering his health, I thought it right to propose the removal of the thumb; which I amputated at the second phalanx. The wound healed favorably, and his health was soon restored. On dissecting the diseased thumb, the first phalanx, and a portion of the second was found in a carious state, and the cellular tissue sphacelated; a free incision at an early period of the disease might possibly have saved the thumb.

140 Index finger; the bones of the second, and third phalanx are nearly destroyed by scrofulous ulceration. The finger was amputated.

141 A diseased state of the index finger, occasioned by osseous paronychia; requiring amputation. From a man, 70 years of age; he did not apply for relief until the finger, hand, and arm, were greatly swollen, and inflamed. Symptoms of sphacelation came on, accompanied with violent pain and fever. All the parts being in such an unfavorable state, I did not think it prudent to remove the finger; but as an accumulation of pus was distinctly felt beneath the fascia of the palm of the hand, I carefully made an opening, and an immense quantity of very fetid matter escaped; which afforded temporary relief. By fomentations, poultices, and attending to his health, the inflammation, and swelling of the hand and arm subsided, and his health improved; but the integuments of the diseased finger mortified; the flexor tendons sloughed, and the bones were deprived of their periosteal covering.

I removed the finger near the superior part of the metacarpal bone; the wound healed favorably, and he was soon able to use the hand as a shoe-maker.

142 Humerus and carpal bones, &c. of a dog; affected with exostosis. All the bones of the body were similarly affected. The viscera were healthy.

143 The anterior portion of the pelvis of a horse. One side of the pubis has been fractured, and remains disunited: exostosis is seen on the left side of the ramus of the pubis, and to a greater extent on the ischium (of both sides) near the inferior and posterior edge of the acetabulum.

- 144 Fracture of the humerus of a hawk, which had united in an angular direction; the lower portion having been drawn over the superior.
- 145 A portion of ilium showing the effects of periosteal irritation, excited by the pressure of a fungoid tumor of considerable magnitude, which grew from the periosteal covering of the dorsum ilii. The kidneys were affected with carcinoma. This preparation was removed from a man, 70 years of age.
- 146 An oblique fracture of the femur, between the two trochanters, which had united by osseous deposition. From a woman, 55 years of age, very corpulent, and plethoric; she was knocked down by the wheel of a cart, which struck against her left hip; and was admitted into Cripplegate workhouse. On examining the limb, I found it shorter than the other by an inch and a half, and the foot turned inwards; from which I inferred the case to be one of fracture of the neck of the thigh-bone, external to the capsule. The thigh became greatly swollen, and the integuments discolored and inflamed. The patient was laid on a mattress, and the limb placed in a straight position by means of bolsters; and great care taken to prevent the foot inclining to one or the other side. Leeches and cold lotions were used; and the inflammatory symptoms gradually subsided. She was kept on the mattress for four months; at the end of which period she was enabled to elevate the limb, and began to walk with crutches; and in three months more, the patient could walk without any assistance. There was but little shortening of the limb. About 12 months from this period, she was re-admitted, with all the symptoms of organic disease of the liver, accompanied with ascites, which terminated fatally.
- Inspectio cadaveris.*—The liver was greatly enlarged, and its structure very solid, from the effects of chronic inflammation; the gall-bladder was filled with a dark colored viscid secretion. The spleen large and solid; the peritoneum was coated with organised lymph. Appearance of the fracture. The thigh-bone was fractured obliquely close to the neck; one portion of the bone was driven into the cancellous structure between the trochanters; and a solid, thick semi-

circular belt of bone had formed round the fractured extremities for their better protection. These appearances are seen in the preparation. In fracture of the thigh-bone within the capsular ligament, or immediately external to it ; I found that by placing the patient on a proper bed, and by keeping the limb in a straight position with the aid of pillows, the union took place more favorably, than when splints, or any other mechanical contrivances were employed.

147 A fractured neck of the thigh-bone, external to the capsular ligament, close to the neck of the bone. This specimen shows beautifully, nature's efforts to effect osseous union by an accumulation of new bone round the neck, from the trochanter major to the minor, and would, in time, have completed a perfect union of the fractured parts. This specimen was sent to me, without a history of the case ; probably inflammation of the capsular ligament might have produced fever, and caused death.

148 A fracture of the thigh-bone, which had extended through the base of the neck ; and had united by ligamentous and osseous deposition. From a man, 72 years of age, who slipped off a curb-stone. The limb was carefully examined, but no crepitus could be detected ; nor was there any swelling, or sign of dislocation of the joint. He complained of great pain in the hip, and his foot was turned a little inwards ; but there was scarcely any shortening. The only conjecture that could be formed as to the nature of the injury was, that there might be an incomplete fracture of the neck of the thigh-bone ; he remained in bed seven months, when union appeared to have taken place ; which could scarcely have been anticipated, considering the advanced age of the patient. He remained in Cripplegate work-house, where he was attacked with typhus fever, which caused his death.

Appearances of the fracture.—On making a section of the hip-joint, the thigh-bone was found to have been fractured obliquely at its superior portion ; the fracture extending through the base of the neck.

The fractured extremities had united closely by ligamentous matter, and the external surface was well defended with osseous deposits, which in time would

have effected a perfect osseous union. The other section of the bone was macerated.

- 149 An extensive oblique fracture of the os femoris, which had united by bone. This is a complicated fracture of the shaft of the femur, at about four inches from its neck; the latter was also fractured at its base, and it was driven deeply into the cancellous structure. The external surface is well covered by very solid osseous deposits; and a large bony mass had formed on the under surface of the neck, which extended to the edges of the trochanters. These appearances are seen in the preparation. From a woman, 55 years of age; she was corpulent; and had been hemiplegic on the left side for nearly twelve months.

The accident happened by falling down a flight of stairs; from the immense size of her thigh, the great enlargement caused by the accident, and considerable ecchymosis, it was quite impossible to ascertain whether the case was one of fracture within the capsular ligament, or of the upper part of the shaft of the thigh bone. The toes were turned inwards, and there was slight shortening of the limb. The leg was placed in a straight position, and supported; she experienced great pain, and symptomatic fever came on, which continued for ten days.

After the swelling of the thigh had subsided, another attempt was made to ascertain the situation of the fracture, when it was evident by the crepitus, that the bone was fractured at its superior part. Six months after the accident, she was able to walk nearly as well as before the injury; but this was effected imperfectly from the circumstance of the injured limb belonging to the paralysed side. She died ultimately of apoplexy. *Inspectio*.—The arachnoid membrane, and pia mater, were thickened by chronic inflammation; and there was a considerable quantity of fluid between them.

The substance of the brain was very vascular; there were four ounces of water in the ventricles; and several serous cysts in the plexus choroides on both sides. The arteries at the base of the brain were hardened by cartilaginous and bony deposits. This was a case of serous apoplexy; and the first attack

must have been of the same kind, as no sign of an old apoplectic cell in any part of the brain was seen. The thoracic viscera were healthy; the liver was very large and firm in structure; sections showed a nutmeg appearance; and the gall-bladder was filled with dark colored bile. The spleen was large, and its structure firmer than natural. The stomach and intestines were of an enormous size; the mucous glands in the small intestines were greatly developed.

In SIR ASTLEY COOPER'S splendid work on Fractures and Dislocations, there is a figure exactly resembling the above preparation.

50 A section of the upper part of the thigh-bone, showing a fracture extending through the base of the neck. The case is described in No. 152.

51 A portion of the pelvis of a full blood mare. There is a fracture on the left side, extending from the middle of the os pubis, to the base of the tuberosity of the ischium. A part of the ilium and the acetabulum has also been fractured. From the appearance of the specimen the bone must have been comminuted, and some of the fragments absorbed; osseous union had afterwards taken place, which caused great deformity of the pelvis. The external surface along the line of fracture is covered with rugged bone, and the thyroid foramen obliterated. Although the pelvis was so greatly deformed, the mare gave birth after the accident to two valuable foals.

52 Sections of a fractured femur.—There are two fractures, one through the cervix femoris, the other through the shaft, between the trochanters. Black bristles denote the line of union.

From a woman, 56 years of age, who had been afflicted with carcinoma mammæ for nearly two years; and in consequence of the glands in the axilla not appearing to have participated in the morbid action, the breast was removed. A few months after the operation, her health became affected; tumors appeared beneath the integuments of the chest on the side whence the mamma had been extirpated; and on various parts of the body.

She became greatly emaciated and enfeebled; and in attempting to get out of bed, fell on the floor, which occasioned the fractures. In this instance, the foot

immediately after the accident was everted, but became afterwards inverted.

Inspectio Cadaveris.—The tumors on the external surface of the body, were composed of carcinomatous and medullary matter. The lungs contained a great number of fungoid and medullary tubercles; the abdominal viscera were healthy.

Appearances of the fractured parts.—The neck of the femur was fractured through its base, and the fracture had extended into the capsule of the joint, which was lacerated: there was likewise a fracture of the shaft of the bone, between the two trochanters. A section of the femur showeth, that a close ligamentous union had been effected at the neck of the bone; and the capsular ligament was greatly thickened. The fracture through the shaft had united by bone; and there was a large collection of osseous matter on its external surface. The cancelli of the bones contained medullary matter. It is rather surprising that so great a degree of union should have taken place, in a debilitated state of body, with so much constitutional disease.

The history of this case was published in the thirteenth volume of the Transactions of the Royal Medico-Chirurgical Society; and there is an engraving of the preparation in SIR ASTLEY COOPER'S Work on Dislocations, and Fractures of Joints.

- 153 A section of a thigh-bone, showing an oblique fracture of the neck, within the capsule, which had united by ligament. At the inferior part of the head of the bone, an angular portion of the neck remains, which is thickly covered with ligamentous matter on its fractured surface; the same change has taken place on the corresponding portion of the head of the bone, and firm ligamentous union has been produced between these parts, and the base of the cervix femoris. The neck of the bone is absorbed.

The capsular ligament is converted into a substance of semi-cartilaginous density, which adheres closely to the newly-formed joint.

The interval between the trochanters is filled with an abundance of osseous substance, which serves as a prop to the fractured extremities, and performs the office of a neck to the bone.

From a man, 65 years of age, who was thrown from a gig; he was confined to his bed for nearly twelve months; and at the end of this period could only walk with the aid of a crutch.

For several years previous to his death, he had been afflicted with diseased urinary organs; and voided, at different times, several small calculi with the urine, which was sometimes tinged with blood. Three weeks before his dissolution, he was attacked with excruciating pain in the right kidney, accompanied with great difficulty in voiding his urine; which was generally mixed with blood. These symptoms increased, although every endeavour was made to lessen the patient's sufferings.

I was requested to inspect the body.

The thoracic and abdominal viscera were healthy, but the peritoneum in the right hypochondriac, and lumbar regions was highly inflamed; which could not be accounted for, until the kidney on this side was examined.

This organ was found to be greatly enlarged; its structure very soft, and highly inflamed; and the infundibula, pelvis, and ureter greatly dilated. Its internal surface was in a state of sphacelation; which had been occasioned by the obliteration of the ureter by coagulated lymph, about midway between the kidney and bladder. A considerable portion of the pelvis of the kidney was destroyed by ulceration; and the renal artery and vein, were laid open by the same process; which accounted for the blood and fluid found behind the peritoneum. The other kidney was large and flabby; the urinary bladder had its muscular coat greatly increased in size; the mucous coat was sphacelated; and there were several large sacculi in the bladder; all these changes were, no doubt, occasioned by the violent efforts of the urinary bladder to expel its contents.

A plate of this preparation is given in SIR ASTLEY COOPER'S Work on Fractures and Dislocations.

The history of the specimen was published in the Transactions of the Royal Medico-Chirurgical Society.

154 A comminuted fracture of the thigh-bone, at its superior portion, between the trochanters; it extended

through the cervix, and lacerated the capsular ligament.

From a woman, 85 years of age ; she lived fourteen days after the accident ; the synovial covering of the neck of the bone had been lacerated, and an opening made into the cavity of the joint, into which blood had been effused from the torn vessels, as well as into the cellular tissue of the muscles of the thigh, near the fractured part. This specimen shows well to what an extent a fracture of this nature may proceed in old subjects, whose osseous structure has become fragile. The history of this case is published in the thirteenth volume of the Transactions of the Royal Medico-Chirurgical Society, in a paper of mine on Fractures of the neck of the Thigh-bone within the capsular ligament.

- 155 A corresponding section of the thigh-bone. See the diseased kidney, and the bladder and prostate gland.
- 156 A fracture of the neck of the thigh-bone united by ligament. From a man, 82 years of age, by trade a tailor, a pauper, in Cripple-gate workhouse. Observing he walked lame, yet without the aid of a stick, I was induced to ask the cause of his lameness ; when he informed me, “ that about six years ago, he had a fall and fractured his thigh-bone, and was conveyed to Saint Bartholomew’s Hospital, where he remained nearly twelve months. When he was discharged, he was sent to his own apartment, and was unable to leave his bed for six months. Shortly after this period, he could walk with crutches ; which he continued to employ for two years, he then used but one ; and after some time could walk very well with a stick.” On examining the limb of the left side, I found it shorter than the other, the foot *everted*, and considerable enlargement about the trochanter major, which convinced me, that the neck of the thigh-bone had been fractured within the capsular ligament ; yet I had never seen a patient walk with so little lameness, after such an accident, at so advanced an age.

The patient died from the effects of an old asthma, and hydro-thorax.

Post-mortem examination.—There was a considerable quantity of water in both sides of the chest ; and old

standing adhesions of the pleura. The lungs were partly hepatised, and emphysematous; the bronchial ramifications were filled with mucus tinged with blood; and the internal surface was highly inflamed. The heart was small, and the aortic and mitral valves were cartilaginous and osseous. The liver was granulated; the spleen solid; and the mucous glands in the ileum and cæcum were much enlarged. The capsular ligament is greatly thickened by organised lymph deposited on its internal surface; and its external part is nearly converted into bone. The neck of the femur had been fractured transversely close to the head of the bone; and a considerable portion of fractured surface had been rounded off. Lymph had afterwards been deposited, which had become organised, similarly to the end of a stump after amputation. A ligamentous union had been effected between the remaining portion of the neck of the thigh-bone, and the under surface of the head; thus forming an artificial joint; and an immense quantity of osseous matter had been deposited around the inferior part of the neck of the bone, which had kept the fractured ends in juxta-position. This case was considered, at Bartholomew's Hospital, to be a fracture of the neck of the thigh-bone within the capsule, which had united by bone. I think this kind of union more favorable than any other; it is accompanied with less deformity, and the limb is more useful.

- 157 A fracture of the neck of the thigh-bone within the capsule, united by ligament. From a woman 55 years of age; the real nature of the accident was not detected by the medical attendant, and no means beyond rest were employed. The accident happened sixteen months previous to her death.

Examination of the fracture.—The capsular ligament was greatly thickened externally, and its internal surface was thickly covered with organised lymph. The fracture had taken place at the neck of the bone, close to the head: the remaining portion of the neck was absorbed, and lymph deposited, which was organised; short thick adhesions had formed between the internal part of the capsule, and the fractured end of the head.

In this instance there was no attempt made by nature to establish a crutch of bone between the trochanters, for the support of the fractured ends of the bone, as is generally noticed in these cases.

The shortening of the limb was one inch and a half.

If this fracture had been correctly managed, I have no doubt that osseous union would have taken place.

A section of the upper portion of the acetabulum, and head of the thigh-bone is made to show the firm adhesion between the two surfaces.

The two last preparations are very valuable.

- 158 A section of a thigh-bone, fractured between the two trochanters, near the base of the neck, which had united so completely, as to leave scarcely any appearance of cancelli where the fracture had existed. But from the altered state of the trochanter major, the crutch of bone formed between the trochanters, and the thickened state of the capsular ligament, there can be no doubt that a fracture really did exist. The other section is dried, and numbered 3092.

From a patient, 65 years of age; 20 years previous to his death he fell from the main top of a ship upon deck; and fractured, as was supposed, the neck of the thigh-bone within the capsular ligament. He was sent to a hospital, where he remained eighteen months; upon his discharge, was able to walk with a stick, the toes were inclined inwards, and the limb was shorter than the other by one inch.

- 159 A comminuted fracture of the os femoris, close to its head. The patient died shortly after the accident—the other portion of the bone was not allowed to be removed.

- 160 Fracture of the neck of a thigh-bone within the capsular ligament. From a woman, 80 years of age; the neck was fractured close to the head of the femur; the greater part of the neck had been removed by absorption; and the base of the neck had united to the fractured surface; partly by bone, and partly by ligamentous matter. The patient was kept in bed for 12 months; she died from the effects of old age. The preparation shows beautifully the efforts made by nature to promote union in fractures, at a very advanced age.

- 161 A fracture of the neck of the thigh-bone within the

capsule, which had united by ligament. From a woman, 75 years of age, who had been bed-ridden for several years, and who in attempting to get out of bed, fell upon her hip: she complained of great pain in the joint, and near the trochanter major. The limb was examined carefully, no crepitus could be felt, nor were there any signs of dislocation; yet there seemed to be considerable mischief done to the joint. The patient was put to bed, leeches were applied, and fomentations frequently employed. On the third day after the accident, the foot was observed to turn outwards, and there was a shortening of the limb; which denoted a fracture of the neck of the thigh-bone. After this the patient was placed on a mattress, and the limb was adjusted in the straight position, with pillows, &c. About six months after the accident, she appeared to be free from pain; and as she was too infirm to be ever able to walk, all attempts to produce union of the fracture seemed useless. She died from the effects of age.

Post-mortem examination. The capsular ligament was thickened; the neck of the femur had been fractured close to the head of the bone; the rest of the neck was destroyed; and lymph had been deposited on the fractured surfaces. Firm bands of adhesion united the fractured extremities; but no bone had been deposited between the trochanters.

162 A fractured neck of the thigh-bone within the capsular ligament, which had not united. From a man, 82 years of age, who was knocked down by the wheel of a cart running against him in Smithfield. He was immediately conveyed to St. Bartholomew's Hospital, where he remained for six months; it was not clearly ascertained whether there was a fracture within the capsule, or externally to it; but the limb had been placed in long splints. After this he was admitted into Cripplegate workhouse. I found the limb shortened, the foot *everted*, and the trochanter major drawn upwards and backwards, on the dorsum ilii, so as to resemble a dislocation of the head of the femur in this situation; but by carefully examining the joint, I had no doubt the neck of the bone was fractured within the capsule.

The limb was placed in a straight position for six

months; after this he was able to use crutches; and in consequence of the great degree of shortening of the limb, he was obliged to have a shoe with a very high heel; in the course of twelve months he could walk tolerably well with a stick. About eight months previous to his death, symptoms of organic disease of the liver made their appearance; his digestive organs were disordered, and he became emaciated; although he had been in good health for several years since his accident. He was at last attacked with diarrhœa and intestinal hæmorrhage, which could not be suppressed.

Inspectio.—The lungs were healthy; the valves of the heart cartilaginous and osseous. The liver was very small, extremely solid, and granulated. The spleen was small, but firm in texture. The mucous coat of the intestines was extremely vascular; but more especially in the ileum and cæcum; the glands were enlarged, and ulcerated; and there was a considerable quantity of mucus mixed with coagulated blood in the intestines. The congested state of the capillary vessels of the intestines had been caused by the morbid state of the liver, and spleen, which had produced the intestinal hæmorrhage, a fact I have frequently noticed. The limb was shortened to the extent of four inches.

Appearances of the hip-joint.—The external part of the capsular ligament was greatly thickened, and in some portions cartilaginous; on cutting it open, it was seen that the neck of the thigh-bone had been fractured close to the head; and the whole of the neck to its base, had been absorbed.

The trochanter major was drawn upwards by the action of the gluteal muscles, and the base of the neck of the femur was placed on the dorsum ilii, which accounts for the great degree of shortening in the limb.

The internal surface of the capsule was thickly covered with organised lymph; the head of the femur remained in the acetabulum; the synovial membrane of this cavity, and that covering the head of the femur was partly absorbed; as were portions of the cartilaginous coverings.

In the thirteenth volume of the Transactions of the

Royal Medico-Chirurgical Society, a paper of mine is published, on Fractures of the neck of the Thigh-bone within the capsular Ligament. Ten cases were described, nine of them united by ligament, one by bone. This case is also alluded to in SIR ASTLEY COOPER's Work on Fractures, &c.

- 163 The superior portion of the femur, with an oblique fracture united. The parietes of the thigh-bone are very thin; and the terminations of the medullary canal at the ends of the fractured bones are seen.

About six months after the accident, an abscess formed in the hip-joint, which destroyed the synovial membrane, the capsule of the joint, the cartilaginous covering of the head, and epiphysis, and the periosteal covering of the neck, as far as the trochanter major.

From a boy, 12 years of age; the lungs contained scrofulous tubercles; and the mesenteric glands were much enlarged, and converted into caseous substances.

- 164 An oblique fracture of the femur, firmly united. One end of the fractured bone passes over the other to a considerable distance, and on one side of the external surface, a large spiculum of bone has formed, which must have produced considerable irritation in the adjacent soft parts. A section of the bone shows termination of the medullary canal of the fractured portions.

- 165 Sections of the superior portion of the thigh-bone, showing the most decided signs of osteitis, and its effects.

The synovial membrane was in a sloughy state. The real nature of the disease was not detected during the life of the patient; fever came on, and caused death.

- 166 An oblique fracture of the femur near its centre. From the circumstance of the limb being placed in an improper position, the inferior portion has been drawn by the muscles under the superior extremity of the bone to the extent of two inches; where solid union has taken place, in an oblique direction; so that the condyles instead of occupying their usual position are turned outwards.

These appearances are seen in the specimen; and a section of the fractured portion exhibits the termination of the ends of the bones, which are covered

with osseous deposits, similar to that which takes place at the extremities of stumps. The history of this case is not known : there must have been great deformity, and shortening ; and the fibula must have been fractured.

- 167 An oblique fracture of the thigh-bone, about six inches from the condyles. In this instance, the inferior portion of the femur, at the fractured part, is drawn obliquely under the surface of the shaft of the superior portion, where firm osseous union has been effected, and has caused great deformity, and shortening of the bone, as is seen in the preparation. The external surface of the remaining portion of the femur shows the effects of periostitis, having become scabrous from small osseous deposits.

The history of this case is not known.

- 168 A section of the inferior part of a thigh-bone. At about four inches from the commencement of the condyles, the shaft of the bone is of immense magnitude ; and its external surface shows the effects of chronic periostitis. Its anterior parietes are extremely thin ; but the posterior wall is surprisingly thick, the bony substance is irregularly deposited, and is as dense in structure as the petrous portion of the temporal bone.

The medullary cavity is very capacious, especially near the condyles. This bone having been found in a burial ground, it would be a difficult point to decide whether these morbid changes were the result of necrosis, carcinoma, fungus hæmatodes, or abscess in the interior of the femur. Before I made a section of the bone, I imagined the disease was necrosis, but not finding a sequestrum, I am unable to state how the morbid appearances have been produced.

- 169 The inferior portion of a femur, which had been fractured about three inches and a half from the commencement of the condyles.

Every attempt was made to save the limb, but without effect. The knee-joint became inflamed, and enlarged ; and the patient complained of distressing pain ; fever supervened.—It was thought advisable to amputate. The capsule had been lacerated ; it was greatly inflamed, and contained pus. The fracture was oblique, and comminuted ; osseous

- matter is deposited on the bones near the fractured parts. The parietes of the femur are solid, but fragile.
- 170 Section of a femur. From a man, who at an early period of his life, had been affected with rachitis. The external surface of the bone is extremely solid, the parietes of the anterior surface are thin, those on the posterior rather thick; the cancelli are very large.
- 171 Section of a femur, showing osteitis, produced by a disease of the knee-joint. Preserved in alcohol.
- 172 Section of an os femoris. The parietes are extremely thick, and solid, particularly at the central portion of the bone, and the medullary cavity is greatly diminished; these appearances are seen in the preparation. The cancelli of the head, neck, and part of the shaft of the bone, are surprisingly developed, and very dense in structure. The external surface of the bone at the middle portion is also greatly thickened by very irregular depositions of osseous matter. The history of this case is not known; but I should think that the morbid changes have been produced by chronic osteitis, and periostitis. This is a very valuable specimen.
- 173 Thigh-bone of an adult; a section of the inferior half was made to show the parietes, cavity, &c. Its diameter from the cervix to the condyles is very considerable, and greatly out of proportion with the length of the femur. The external surface presents a number of very irregular, solid, osseous deposits; more especially on the posterior surface, from the trochanter minor, along the linea aspera, and as far as the posterior part of the condyles. The parietes are not very thick, but solid; the medullary cavity capacious. The history of the case would be interesting; the morbid changes must, I think, have been excited by chronic inflammation of the bone, and its periosteal covering.
- 174 The right thigh-bone of a woman. The superior, and inferior portions of the bone are particularly healthy in structure; but at about the middle of the shaft, near the opening for the nutrient artery, and proceeding downwards around the bone, to the extent of four inches, the surface presents a very irregular rough appearance, from the existence of osseous deposits. On the internal border of the bone, there

is a considerable enlargement, and caries has taken place to a slight degree in many parts of its extent; this condition is not unlike the incipient stage of necrosis.

This is a beautiful specimen.

- 175 Section of a femur. The parietes at the posterior surface are extremely thick; the cancelli greatly developed; and the external surface is thickened by osseous deposits; the effects of chronic periostitis.

- 176 An oblique fracture of the femur, firmly united. The fracture was very extensive, it was situated at the superior portion of the bone, at about three inches and a half from the inferior part of the trochanter major. The fracture had united in an oblique direction, one portion of the bone passing over the other, and occasioning a great degree of shortening, which must have produced great deformity.

The fracture had united very firmly by an immense quantity of solid osseous matter, which is shown in the preparation.

A section exhibits the two ends of the fractured bone, which are rounded off, as in stumps after amputation; it also shows the solid union which had been effected, between the external parietes of the femur, and the fractured portions.

- 177 An oblique fracture of the femur. The thigh-bone was considerably shortened, in consequence of the riding of one bone over the other.

The medullary canal is obliterated, at the extremities of the fractured bones, by osseous deposits; which I have generally noticed in fractures of cylindrical bones, where the fracture is oblique. There is a spiculum of bone on the external surface of one of the ends of the fractured bone. The fracture must have caused great deformity and lameness.

- 178 An oblique fracture of the femur, which had produced great shortening, and deformity; one portion of the fracture having been drawn over the other to a considerable extent; there is a spiculum of bone at the extremity of one of the fractured ends.

- 179 Healthy stump of a thigh-bone, showing the complete reparatory process by which the end of the bone is defended, viz. the deposition of osseous matter, where no irritation exists to prevent this effect. A portion

of the femoral artery is also preserved in the preparation, exhibiting the extent of its obliteration.

The history of this case is published in the Transactions of the Royal Medico-Chirurgical Society.

- 180 Stump of a thigh-bone, together with another portion of the same bone.

A sufficient length of integuments not having been saved, the stump did not heal: inflammation and sloughing came on; which was succeeded by irritative fever, and the patient died three weeks from the time of the performance of the operation. Scarcely any attempts at reparation had taken place on the extremity of the bone; the periosteum was highly inflamed, and there were all the signs of osteitis; the latter appearance is partly shown in the preparation.

- 181 The stump of a thigh-bone, with very irregular depositions of bone, which had their origin from the periosteum.

- 182 An oblique fracture of the tibia, which had united solidly. The fracture is situated at four inches and a half from the inferior part of the bone; and the upper portion projects over the inferior nearly two inches.

The history of this case is not known; but I have no doubt the fibula was also fractured. This deformity might have been prevented, if proper surgical and mechanical skill had been employed.

- 183 A fracture of the external malleolus, which extended into the joint, and occasioned inflammation; fever supervened, and the patient died.

- 184 A diseased tibia and fibula. — From a man, 74 years of age, who had been afflicted with an ulcer on the integuments covering the anterior part of the tibia for ten years; which could not be healed, although he was submitted to treatment in hospitals. The sore was considerable in magnitude; and there were large fistulous openings in the skin, which were found to communicate with the diseased tibia; and at different times various sized sequestra were thrown out, and several were removed by the forceps. The patient's health did not appear to suffer much from the disease, although he had been distressed with difficulty of breathing, and palpitation

of the heart. These symptoms had increased during the last six months of his life, his health began to decline, and the sore on the leg showed signs of sphacelation.

The action of the heart and arteries became very powerful, and the pulsation was invariably irregular; he complained of great constriction of the chest, of a pain in the left ulnar nerve, and his lips were of a purple color; all of which symptoms denoting organic disease of the heart. The function of the kidneys daily diminished; the inferior extremities became œdematous, and he died suddenly. There were ten ounces of water in the pericardium; the heart was of enormous magnitude; the auricles were greatly dilated, the left ventricle very thin, and its cavity very capacious; and resembling the passive aneurism of Corvisart. The aortic valves were thickened by cartilaginous and osseous deposits. There were three coronary arteries; but they were not much altered in structure.

The left side of the chest contained four pints of water, and there were two pints and a half on the right. The lungs were emphysematous, and some of the cells very large; the liver was healthy.

The ulceration of the tibia was on the external side of the bone, next the fibula; the excavation was deep and extensive, but had not penetrated the medullary cavity. The absorbents had rounded off the spine of the tibia as far as the disease had extended; and had not the patient been so far advanced in years, and affected with organic disease, the diseased action would probably have terminated; for the ulcerative action had nearly ceased, and the vessels of the internal periosteum had begun to deposit new bone on the remaining portions of the tibia and fibula; and the same deposition had taken place in several parts of the interosseous ligament. The bone appeared more solid than natural; some of the sequestra are in the bottle. This specimen shows satisfactorily the effects of ulceration in bone, which is similar to those changes which take place in the soft parts of the body; and the reparatory process is nearly the same, allowing of course for the difference in chemical composition. From the appearances

of morbid parts, I think this was a case of ostitis, and periostitis.

- 185 Tibia and fibula of a man, who had in his infancy been afflicted with rachites.
The bones are curved, they are greatly flattened, and extremely solid; slight exostosis had taken place near the inferior, and inner surface of the fibula.
- 186 Tibia of a man, showing a great enlargement of the bone near the spine, at its inferior portion; the effects of syphilis.
- 187 Two portions of the tibia, and the fibula, from a woman, who died from repeated attacks of syphilis, and the abuse of mercury. The external surface of the bones shows the effects of ostitis, and periostitis; osseous matter having been deposited; and they present a very rough appearance. The parietes of the bones are very thick, and their structure solid; and there are nodes on the portions of the tibia.
- 188 A splendid specimen of necrosis in the tibia; the entire bone has been replaced by a new tibia, which is large and irregular in figure, as is usually the case in newly formed bone. The remains of the original bone are seen in the preparation; they are very white and solid in structure; and their external surface is very rugged.
- 189 A tibia, enlarged, with nodes, &c.; the external surface is covered with irregular osseous deposits
- 190 Section of a tibia; the parietes greatly thickened; the medullary canal is considerably lessened, and the external surface is rough and irregular, from the deposition of osseous substance, which is dense and solid.
- 191 A fibula greatly enlarged, by chronic inflammation, and osseous deposition.
- 192 A sequestrum removed from the tibia of a man; with a portion of carious bone removed from the lower jaw of Grimaldi.
- 193 A malignant growth, not unlike chimney sweeper's cancer; which had its origin from the periosteal covering of the anterior surface of the tibia. The morbid production had destroyed the integuments to a considerable extent; there was a profuse ichorous discharge, sometimes mixed with blood from the surface, which had continued for several months,

- and ultimately affected the health of the patient. As the progress of the disease could not be altered by any mode of treatment, the leg was amputated. About three months after the operation, the inguinal glands became enlarged; symptoms denoting visceral disease were apparent, and the man died. A post-mortem examination could not be obtained. A portion of the vena saphena interna was obliterated, as is shown in the preparation.
- 194 Tibia and fibula of a man. Both bones are extremely dense in structure; and the external surface is greatly thickened by irregular osseous depositions; the effects of osteitis, and periostitis. The parietes of the tibia are extremely thick; the medullary cavity is large. The history of this case is not known. This is a very valuable preparation.
- 195 A section of the superior extremity of the tibia after amputation. This preparation shows the cancellous structure; it likewise displays the mode in which the end of the bone is defended by the deposition of osseous matter; the absorbents having afterwards removed all the asperities so as to prevent any irritation of the newly formed cushion of cellular membrane. In this instance the leg was amputated too near the joint. This preparation is described in the sixteenth volume of the Transactions of the Royal Medico-Chirurgical Society.
- 196 The superior extremity of the tibia and fibula, from a patient whose leg was amputated. The leg was removed too near the joint; and a sufficient length of integuments was not preserved. The end of the stump sloughed, and the bones projected; inflammation of the joint supervened; and the patient died about a fortnight after the operation.
- 197 Exostosis between the articulating surfaces of the cannon-bone and pastern; which would have produced ankylosis of the joint. From a horse.
- 198 Cannon-bone, and pastern of a horse, with extensive exostosis surrounding the articulating surfaces. There is also a considerable enlargement of the superior and anterior surface of the cannon-bone.
- 199 Complete ankylosis of the coffin-bone, with the small and large pasterns, the shuttle-bone not affected. From a dray-horse.

- 200 A portion of the cannon-bone, the pastern, coffin, and shuttle-bones. From a horse.
Slight exostosis is seen on the superior part of the cannon-bone, and the first pastern.
- 201 Extensive exostosis on the outer surface of the pastern bone of a horse. A section of the bone shows the cancellous structure, as well as the origin of the exostosis.
- 202 Coffin-bone, shuttle, first and second pastern; with their epiphyses. The bones are injected with size and vermillion; the cartilages are not colored. From a very young foal.
- 203 Hoof of a young foal.
- 204 Foot of an ass injected with size and vermillion; the flexor tendons, &c. shown.
- 205 Coffin-bone, small and large pastern, and sesamoid bones with the integuments. From a zebra.
- 206 Half of the cranium of a cow. On the right side of the skull, the bones are enormously expanded; this enlargement was occasioned by a medullary tumor, which formed in the diplœ. The morbid growth had caused destruction of the integuments covering this part of the head, and had formed a bleeding fungus, which presented a very frightful appearance. It is singular that the internal table of the skull was not affected, nor were the membranes of the brain. The liver contained a great number of medullary tubera. The animal was greatly emaciated; the muscular fibres very flaccid; and the cellular tissue tinged with bile.
- 207 Osteo-sarcomatous tumor, in the hinder leg of a rat; which originated from the tibia, near the knee joint. The tumor is injected.
- 208 Foot and part of the leg of a cock. The leg is fractured at the inferior part of the tibia, as is the upper end of the tarsal bone. Osseous union has taken place, and the joint is completely ankylosed. In the same bottle there is part of the thigh and leg of another bird, showing a stump of the tibia. The bird lost its leg from the injury inflicted by a horse in treading on it.
As it was a favorite bird, the owner would not allow it to be killed; and it lived for several years after the accident.
- 209 Foot and leg of a cock; the bones of the middle toe

are in a carious state, and produced a fungoid growth beneath the integuments.

- 210 Tibia and fibula of a Newfoundland dog, which were fractured by the kick of a horse. Attempts were made by a farrier to produce union, but the dog tore off the splints each time they were applied. The leg was then left to nature; the bones did not unite, and the animal appeared in great agony; he was eventually destroyed.

It was a comminuted fracture about three inches from the inferior extremities of the tibia and fibula, and there were no signs of bony, or ligamentous union. The external surface of the fractured bones was thickly covered with osseous deposits, as in exostosis. These appearances are seen in the specimen.

- 211 A luxated clavicle. The inner end of the clavicle is driven forwards, and obliquely downwards, so as to rest upon the front of the sternum, in a line with the cartilages of the first and second ribs.

A ligamentous union is formed between the end of the clavicle and the surface of the sternum; and a large process of bone has been produced from the periosteum of the clavicle at its superior surface, about half an inch from the dislocated end, and occupied the space between the articular surface of the sternum, and the cartilage of the first rib. The cartilage of the first rib is converted into bone, and anchylosis is effected between it and the sternum.

- 212 Dislocation of the elbow-joint. The ulna and radius are thrown outwards and backwards, and the former bone has become anchylosed to the humerus in its new position. The coronoid process of the ulna is united by bone to the posterior aspect of the rounded condyle of the humerus, with which the radius usually articulates; its olecranon process is anchylosed to the posterior surface of the epicondyle, while the outer half of the greater sigmoid notch is filled with ossific matter, and united by the same medium to the posterior surface of the condyle.

The trochlear portion of the articulating surface of the humerus preserves its natural form, and is scarcely affected by the inflammatory action which succeeded the injury; but the condyloid articulating surface is concealed by an irregular bony lamina, which is

adherent to its surface, and is attached inferiorly to the coronoid process of the ulna, and superiorly to the anterior surface of the humerus immediately above its articulating surface. The head of the radius has been thrown completely off the humerus, and the interval between its superior surface and the epi-condyle, has been filled with coagulable lymph, which has become organised and converted into ligamentous substance. In the midst of this ligamentous substance, a small mass of bone of a triangular figure has been deposited, which is converted into a point of support, and articulation for the cup shaped cavity upon the head of the radius; it is firmly attached to the middle of the cup by a strong inter-articular ligament, which firmly secures the head of the bone, while it permits of the utmost degree of movement in rotation. The external condyloid ridge of the humerus, has undergone a change in correspondence with the new position of the radius, and is prolonged outwards to a considerable extent in the form of a sharp bony crest, which gives attachment inferiorly to the ligamentous substance of the new joint for the radius. The lesser sigmoid notch is quite perfect, and its cartilage, and synovial membrane healthy. From the mode of union of the ankylosed bones, the arm must have been placed in the extended position. The specimen was sent to me, without the history of the case—if surgical aid had been employed soon after the accident, the dislocation might have been easily reduced.

The description of this peculiar dislocation was published in the *Lancet*, April 18th, 1840.

- 213 Bones of the elbow-joint. A perfect osseous union has taken place between the end of the humerus, and the head of the ulna; and unfortunately in a straight position. The head of the radius is in a carious state, and its surface is roughened to some distance by the deposition of osseous matter in small masses. If the arm had been placed in a bent, or angular position, it might have become a more useful member.
- 214 Bones of the elbow-joint. The soft structures and cartilaginous portions of the joint, had been destroyed by ulceration and absorption.

Periosteal inflammation had affected the external surface of the ulna and radius, for some distance beyond the joint; and enlargement of these bones had been produced, as is seen in the specimen. The arm was kept in a bent position, with a view to the production of ankylosis; but constitutional symptoms came on, with great pain, &c., and rendered it necessary to amputate the arm. The disease in the joint was thought to have been occasioned by syphilis, aggravated by the effects of mercury. The rounded enlargement near the head of the radius resembles a node.

- 215 Bones of the hand, with the inferior portions of the radius and ulna.

In consequence of an injury done to the wrist, inflammation ensued, which increased to a great degree, although very bold treatment had been employed to subdue it. Pus formed in the joint; the hand became greatly swollen, and the integuments were inflamed. An abscess pointed at the wrist, which burst, and there was a great discharge from the opening. This did not lessen the pain in the joint; pus continued to be discharged, and was occasionally extremely fœtid; no granulations were formed at the edges of the opening; nor were there any signs of cicatrisation; but the discharge continued profuse; the patient's health became disordered.

On introducing a probe into the wound, the bones were found denuded; and it was thought necessary to amputate the arm. All the soft parts of the joint, with the cartilages, and a considerable portion of the ulna and radius were destroyed by ulceration, and an exostosis had formed on the former. The ends of the ulna and radius are firm in texture, and dense, without any scrofulous tendency, and the carpal, and metacarpal bones healthy. If the patient's health had not been so much affected, the joint might, in time, have ankylosed.

- 216 The ulna and radius, with the carpal and part of the metacarpal bones, affected with scrofula. From a man, 34 years of age. The disease in the joint had been progressively increasing for more than a year. Fistulous openings formed between the joint and skin; there was a profuse caseous discharge; and

several spiculæ of bone were discharged at different periods. In consequence of the man's health becoming affected, and as he appeared to have no disease in the lungs or mesenteric glands, and there seemed no possibility of saving the arm, I amputated it. The stump healed favorably, the ligatures came away about the twelfth day after the operation; and his health was soon restored. After his cure, he left Cripplegate workhouse; but I have not seen him since, nor have I heard any thing respecting the result of the case.

I am, by no means, an advocate for proposing operations in scrofulous patients, having seen so many cases which proved unsuccessful.

Appearances of the morbid parts.—The whole of the natural structures have been destroyed by ulceration; and a considerable portion of the ends of the ulna and radius absorbed.

Exostosis has commenced above the parts which were diseased; the carpal, and metacarpal bones are extremely soft, and the cancelli are filled with a caseous secretion.

217 Hand; the arteries injected with size and vermillion. From a healthy man, 24 years of age, who had received a violent blow on the wrist, which produced considerable ecchymosis, and was followed by great pain in the wrist, and considerable swelling in the hand and arm. Prompt means were not employed to check the inflammatory action after the injury; pus formed in the joint, occasioning destruction of the soft parts, cartilages and ligaments; and an abscess formed beneath the integuments on the external part of the hand. The subcutaneous cellular tissue, and fascia, with the integuments sphacelated.

Appearances of the diseased joint.—The ends of the ulna and radius, with the carpal bones, were in a carious state; and there was a considerable collection of pus beneath the palmar fascia; and upon the inner surface of the fore-arm. The stump healed favorably, and the patient was soon restored to health.

218 A hand; the arteries injected with size and vermillion. The soft parts, cartilages and ligaments of the wrist, and carpal bones, are destroyed by ulceration. An

abscess formed on the upper surface of the wrist, which communicated with the joint; a probe was introduced, and the bones were felt to be denuded.

- There was a considerable discharge from the opening, which continued for several months; the disease progressively increased, and caused considerable pain; then the hand and arm became greatly swollen; and the patient's health was so much affected, that it was considered necessary to amputate the arm. The stump healed favorably; and the man soon recovered. The disease was produced partly by a blow on the wrist, and partly by the effects of gout.
- 219 A hand; the carpal and metacarpal bones, and the joint affected with chronic inflammation, &c. From a female, 19 years of age, who had suffered nearly two years with a disease in this joint, which commenced without any assignable cause, and did not appear of a strumous origin. Pain was at first felt in the wrist, which increased slowly; inflammation of the joint came on, and the hand became swollen. The patient had been seen by several able surgeons at the commencement of the attack; but the disease continued to make progress, although means had been employed to check its course. Ultimately pus formed in the joint, and an abscess presented beneath the integuments, on the upper surface of the wrist, which was opened. At different periods, other collections and openings formed, and occasionally small spiculæ of bone exfoliated.
- In consequence of the arm and hand not being kept in a splint, the remaining portions of the carpal bones were drawn under the ends of the ulna and radius by the action of the flexor muscles, which caused a very unsightly appearance, and occasioned great pain. The discharge was very profuse; her health became affected; and she had symptoms of continued fever, not hectic. A consultation was held; there seemed no probability of saving the arm, and her health being affected, the opinion was unanimous that the arm ought to be removed to save the life of the patient. I performed the operation; the stump healed by the first intention, and the ligature came away in about a fortnight. She soon recovered her health, and was able to use an artificial hand.

The hand was injected with size and vermillion. On examining the morbid parts, it was found that nearly the whole of the natural structure of the joint had been destroyed, and a few fragments only of the carpal bones remained, which were coated upon their surfaces with organised lymph.

The osseous structure was very solid, showing it was not affected with scrofula. The ends of the ulna and radius were greatly thickened by organised lymph; and the ulna, for nearly three inches above its extremity was enlarged, from the deposition of osseous matter on its external surface, the effects of osteitis and periostitis.

From the patient having a good constitution, and the ulna and radius, and remaining fragments of the carpal bones being in a healthy state, I am unable to state why the inflammatory action in the joint had not been checked at the commencement of the attack.

This is a valuable specimen.

- 220 A scrofulous finger (index) which was amputated. The structure of the second articulation of the joint, was nearly destroyed. There was a large fistulous opening in the integuments, which communicated with the diseased joint, and a fungus surrounded its edges, which bled freely.—The patient did well.
- 221 The first phalanx of the index finger; the structure of the joint destroyed and the bone denuded, the effects of paronychia.—The finger was amputated.
- 222 First joint of the finger; the joint had been cut into by accident with a knife; proper attention was not paid to it; the finger became extremely painful and swollen, and it was found necessary to amputate. If the finger had been placed on a splint, and means adopted to prevent the inflammatory action, it might have been saved.
- 223 Joints of a finger, from a man who had suffered several severe attacks of gout. Most of the joints of his body were covered with a chalky deposit.
- 224 Acetabulum; the cartilaginous covering is nearly absorbed, as is part of osseous structure.
- 225 Part of an acetabulum, ilium, and pelvis. All the soft parts, cartilages and ligaments belonging to the hip joint, have been destroyed by ulceration, and firm

ligamentous ankylosis is effected. The other section is in the Museum of the Royal College of Surgeons. From a man, 65 years of age, who had received a severe injury in the situation of the hip-joint. Great swelling and inflammation, with extreme pain in the hip, were the consequence. Active means were employed to check the progress of the disease by the gentleman who attended the patient; but the pain in the joint still continued to annoy him.

He was confined in bed for nine months; after this an abscess formed near the groin, which was opened, and a considerable quantity of pus, mixed with flakes of coagulated lymph escaped, and a copious discharge continued from the opening for nearly two years. The patient had been greatly affected by the pain he had endured; but shortly after the discharge of pus, the pain ceased and his health improved, but the hip-joint remained useless.

He was strictly desired to keep the leg in a splint, in a straight position: this he did not attend to, but preferred sitting during the day in an arm chair; the consequence was, that ankylosis of the joint took place in angular position.

He remained in good health for several years, but was eventually attacked with symptoms denoting organic disease of the liver; jaundice came on, succeeded by ascites, and the operation of paracentesis was performed. The fluid again accumulated in the course of three months; but his health was so much affected, that the operation could not be repeated.

On inspection, the peritoneum was found greatly inflamed, and thickly coated with coagulated lymph; and the intestines were agglutinated. The liver was granulated; the spleen was large, and its capsule cartilaginous.

The union of the joint was so very firm, that it was considered a case of osseous ankylosis, until the section I have described was boiled, when it proved to be only a ligamentous union.

- 226 A diseased hip-joint, which resembles in some degree the appearances seen in a fractured neck of the thigh-bone, within the capsule. From a woman, 70 years of age, who died of sanguineous apoplexy. Ten years previous to her death, she had a scrofulous

affection of the hip-joint, which occasioned a spontaneous dislocation, and shortened the limb four inches, the foot being turned inwards. She recovered from this attack, and was able to walk with a stick, although very awkwardly.

I examined the body. There was a large cicatrix on the integuments covering the trochanter major; firm adhesions had taken place between the cellular tissue and the periosteum covering this process of the femur, and its size was greatly diminished.

There was another scar in the integuments in the groin, on the side of the diseased joint. The cellular tissue covering the capsule was greatly condensed, as was its internal surface which was thickly coated with organised lymph. The head of the femur had been destroyed by caries; the acetabulum was filled by dense coagulated lymph, and the neck of the bone was situated partly on the dorsum ilii, to which it was attached by firm ligamentous bands. The lungs contained a great number of scrofulous tubercles, and the pleura adhered firmly; there were likewise strumous tubercles in the liver.

Blood had been effused between the arachnoid membrane and the pia mater over both hemispheres of the brain; and the convolutions were much flattened. The right lateral ventricle was greatly distended with blood, in a coagulated state; and the thalamus nervi optici was lacerated. The left ventricle contained about three ounces of bloody serum. The internal carotid arteries, and the basilar were partially ossified.

The preparation of the brain is in the Museum of the Royal College of Surgeons.

I could not ascertain whether the cicatrix on the integuments near the trochanter, had been produced by the application of caustic, or was the effect of scrofulous disease in the bone.

The scar in the groin was found on dissection to have been the result of an abscess, which had communicated with the hip-joint.

227 The superior part of the femur of a man; the head of the bone is nearly destroyed by ulceration, as is also a part of the neck.

The history of this case is not known.

- 228 The upper portion of a thigh-bone. In consequence of chronic inflammation of the hip-joint, occasioned by an accident, the soft and cartilaginous parts were absorbed, and exostosis has commenced on the trochanter major, and on the shaft of the femur.
From a woman, who had been a cripple for several years. The acetabulum was not removed; I have no doubt that it was diseased.
- 229 The superior portion of a femur. The head of the bone is of enormous magnitude; and from having been deprived of its cartilaginous covering, the surface is smooth and polished, a condition very probably produced by friction. Exostosis had been produced on the whole of the neck of the femur, and had extended to the trochanters, and to some distance down the shaft of the bone. The medullary cavity is very capacious, and the parietes very solid. The history of this case is not known.
- 230 A diseased head and neck of the thigh-bone. From a boy 13 years of age, of a strumous diathesis; he had complained of pain in the knee-joint for several months; and walked lame. The surgeon who attended the patient imagined the disease was in the knee-joint, and treated the case accordingly.
The patient's health becoming affected, he was obliged to keep in bed; he was unable to use the leg, and suffered great pain.
I was requested to see the boy; a slight examination showed that there was considerable disease in the hip-joint, but nothing the matter with the knee, except the painful sensations occasioned by the hip disease. There was considerable enlargement in the situation of the joint, and fluctuation was distinctly felt, which proved that there was an accumulation in the joint; the leg appeared much longer than the other, and the foot was turned inwards, which position could not be altered. As he was suffering from distressing pain, accompanied with symptoms of hectic fever, and as the abscess was superficial; I made an opening into it, merely with a view of giving temporary relief, and nearly three pints of scrofulous matter escaped. The pain and febrile action subsided, matter continued to be discharged, and his health appeared to improve. After this, matter

formed beneath the fascia of the thigh, and it was necessary to evacuate it by an opening.

Symptoms of hectic fever again came on; he was greatly emaciated; the integuments of the nates and sacrum sloughed, and the periosteal covering of this bone was denuded; irritative fever supervened, which terminated his existence.

Inspection.—The lungs were nearly destroyed by scrofulous tubercles, and vomicæ would soon have formed. The bronchial glands were affected with scrofula. There were scrofulous tumors in the liver and spleen; and the mesenteric glands were converted into caseous tumors. The whole of the internal surface of the peritoneum was studded with miliary tubercles; and the mucous glands in the small intestines were greatly enlarged. The kidneys appeared healthy; but there were several small calculi in the pelvis of each: and I was informed that several of a similar kind had been voided with the urine during his illness.

Appearances of the hip-joint.—The capsular ligament and the cartilaginous coverings had been destroyed; as was a portion of the head of the femur, and the ligamentum teres. The remaining part of the head of the thigh-bone was found resting partly on a portion of the acetabulum, and the obturator foramen; showing that the dislocation had been produced by disease.

231 A scrofulous knee-joint, in a bent position, imperfectly ankylosed, the patella united to the under surface of the external condyle of the femur. From a man, 30 years of age, who died of phthisis pulmonalis. At an early period of life, he suffered from a scrofulous affection in this joint.

The cartilaginous covering of the condyles of the femur, the head of the tibia, as well as the synovial membrane and ligaments, had been destroyed by ulcerative absorption. The disease had also consumed the principal part of the condyles, and a considerable portion of the articulating surface of the tibia. After these ravages, the flexor tendons had bent the joint to an acute angle. The morbid action having ceased, a healthy reparatory process commenced; and lymph was deposited, which became

organised, and ultimately formed a ligamentous union, or imperfect ankylosis.

This is another proof of want of osseous union in a scrofulous joint. If the leg had been placed in a straight position, the limb might have been useful, or certainly more sightly.

- 232 A remarkable specimen of osseous ankylosis of the knee-joint of a man. The structure of the femur and tibia, is extremely dense and solid; the *linea aspera*, and spine of the tibia, are greatly developed and as dense as ivory. The ankylosed state of the joint is most complete in the situation of the ham, a very long solid process of bone having been formed between the under and inner surface of the femur, commencing about half an inch from the termination of the *linea aspera*, and extending downwards to the inner and under part of the head of the tibia near the ham; these appearances are seen in the preparation. The ankylosis is not so complete in the joint. The patella is united by bone to the under surface of the external condyle.

If mechanical aid had been employed to keep the leg in a proper position, it would have been more useful to the patient. The history of this case is not known.

- 233 The left femur, with the tibia, and a part of the fibula. The thigh-bone had been fractured at about eight inches from the extremity of the condyles, and has been firmly united by bone. The knee-joint is completely ankylosed by bone, in a bent position; the internal surface of the patella is adherent by bone to the under surface of the condyles of the femur.

About six inches from the head of the tibia, there is an oblique fracture, which has united, and has caused considerable shortening of the bone, and great deformity. The fibula has likewise been fractured; osseous matter has been deposited on the interosseous ligament, and bony union has been effected between this bone and the tibia.

This is a most singular specimen of deformity. The history of the case is not known. One can scarcely believe that any surgeon could have seen the person.

- 234 A diseased knee-joint; from a young boy. The leg

was amputated. The natural structure of the joint is completely destroyed; the effect of inflammation and absorption.

A section of the bones shows the parietes to be very thin, and the internal lining of the medullary canal highly inflamed; but there were no signs of caseous deposition in the cancelli; whence it may be inferred that this was not a scrofulous affection.

235 The knee-joint of a man, 40 years of age. All the soft parts of the joint were destroyed by chronic inflammation and absorption, as were the cartilaginous coverings. From the absence of synovial fluid, and from the continued fixed position of the knee, the opposed surfaces have by the movement of the joint, become highly polished, and resemble ivory; a fact I have frequently noticed in joints affected with chronic inflammation.

The leg was injected with size and vermillion. A section of the femur is made; its structure is healthy; the bones are highly vascular, especially at their articular surfaces; but no particle of the injection could be seen in the small portions of the cartilages which remained. The leg was amputated.

From the healthy state of the bones, I think, that if the case had been, at the commencement, scientifically managed, the limb might have been saved.

236 The bones of the knee-joint of a man, affected with scrofula. All the soft parts were destroyed, as were the cartilages; the under surface of the condyles, and the head of the tibia, are in a carious state. The bones are very light and soft; the cancelli are loaded with scrofulous matter, and ligamentous union has taken place between the under surface of the patella and the depression between the two condyles, which is shown in the preparation.—The patient died of phthisis pulmonalis.

237 The right knee-joint of a man, who had been severely afflicted with rheumatism. The whole of the natural structure had been destroyed by chronic inflammation and ulceration, and the joint gradually became contracted into the bent position. In consequence of the pressure of the posterior, and under surfaces of the condyles of the femur upon the head of the tibia, a considerable portion of that bone on the

right side has been absorbed, and the patella is firmly united by ligament. A spiculum of bone of inconsiderable size has formed a little above the patella, which projects upwards and outwards.

The cancelli of the femur are extremely large and hard: these appearances are shown in the specimen.

- 238 The inferior part of the thigh-bone of a man. The bone had been fractured in a transverse direction close to the condyles; inflammation of the joint ensued, which ultimately terminated in destroying all the soft parts of the joint. The leg having been kept in a straight position for a considerable length of time, imperfect ankylosis took place, and the patient with the aid of a stick, was able to use the limb.—He died of typhus fever some years after the accident.

Appearances of the bones.—The fractured portion has united by bone, to the head of the tibia; a considerable portion of the condyles has been absorbed, and there is an appearance in the femur, as of the extension of the fracture in a perpendicular direction through the shaft of the bone. This has become united by solid osseous deposits, and at the end of the femur resembles two segments. The cancelli are extremely soft.

This is a very curious looking preparation, and one very difficult to describe.

- 239 The knee-joint of a man; the leg was amputated. The patient had been afflicted with chronic inflammation of the joint nearly two years.

The joint became stiff, painful, and useless, which induced him to have the leg amputated. The osseous structure of all the bones belonging to the joint is healthy; but the cartilages have been absorbed, and the articulating surfaces closely approximated; there are no signs of ligamentous or osseous union. The surfaces of the bones are polished and eburnated.

- 240 The knee-joint of a man. All the natural structures of the joint have been destroyed; the articulating surfaces have approximated closely, and are polished and eburnated. Osseous matter, in abundance, has been deposited on the articulating surfaces of the femur and tibia, which would in time probably have produced ankylosis. The spine of the tibia near to its

tubercle is enlarged; all the bones are extremely hard.

- 241 The bones of a knee-joint. The inferior part of the femur, near the condyles, is greatly enlarged; and several large processes of bone are formed on each side, and on its posterior surface. The same appearances have also been produced on the posterior surface of the tibia, and the head of the fibula. After making a section of the femur, the parietes were found very thin, but dense in structure; and the cancelli more developed, enlarged, and solid, than I ever before noticed, especially where the enlargement of the femur was so considerable, and these circumstances are seen in the preparation. All the soft parts, and cartilages of the knee-joint, were absorbed. I have not the history of this case, but I have no doubt the morbid changes were produced by ostitis and periostitis; and the expansion of the bones had been occasioned by the increase of size and number of the cancelli.

This is a very valuable specimen.

- 242 A scrofulous knee-joint; all the soft parts and cartilages absorbed. The bones are extremely soft, and very light. From a young subject.
- 243 The interior portion of a femur. A considerable portion of the external surface has been destroyed by ulceration, and in several parts osseous matter has been deposited irregularly; there is an enlargement resembling a node, on the outer surface of the condyle. The capsule of the joint was inflamed, and the cartilaginous coverings were partly absorbed. Amputation was performed. This was a case of ostitis and periostitis.
- 244 The inferior extremity of a femur. A section of the bone was made; its parietes are thin, and the cancelli are filled with caseous matter. The soft parts, the cartilaginous substances, and the ligaments were destroyed. The periosteal covering of the femur was separated from the bones, and converted into osseous matter; the bones of the joint were inflamed.
- 245 Bones of the knee-joint of a man, showing the cancelli; the semilunar cartilages, and the synovial membrane are injected, the latter is inflamed.

- 246 Knee-joint of a child affected with scrofula ; in a bent position ; amputation was performed.
- 247 A magnificent specimen of chronic inflammation of the synovial membrane of the knee-joint. The capsule was distended to an enormous size ; and on cutting it open, it was found to contain coagulated blood, large flakes of lymph, and an oleaginous looking fluid.

The internal surface of the capsule was thickly coated with organised lymph, and there were several small pendulous tumors on the surfaces of condyles, similar to those described by HUNTER ; they are seen in the preparation. The cartilaginous covering of the condyles, and head of the tibia has been absorbed ; small round osseous deposits have formed on the surfaces of these bones, and similar changes have taken place in the capsule and head of the fibula. The popliteal artery was ossified ; its caliber small.

The other knee-joint was affected with the same disease, but not to so great an extent, and the wrist joints were likewise diseased. The dura mater adhered very firmly to the calvarium, which was caused by the deposition of lymph and osseous substance. The arachnoid membrane and pia mater, were greatly thickened. The brain was extremely firm and inflamed, and there were two ounces of water in the lateral ventricles ; most of the arteries were thickened by cartilaginous and osseous deposits. The tractus optici, and optic nerves were extremely small, which satisfactorily accounted for the amaurotic affection of both eyes. The pleura adhered firmly, the effects of chronic inflammation ; the lungs were healthy ; the liver small and granulated ; the spleen small, its capsule cartilaginous. The whole of the aorta ossified.

Case.—A man, 64 years of age, had been subject to severe and frequent attacks of gout for several years, and most of the joints of the extremities were greatly disfigured by this disease ; chalk-stones having been formed. To these miseries was added one which distressed him more than his other afflictions, the loss of sight by amaurosis for twenty years. A severe attack of gout came on, which

caused a high state of febrile action, affected his brain, and eventually terminated his existence.

The structure of both eyes was natural; the optic nerves were extremely small.

The history of this preparation is given with the description of morbid eyes.

- 248 An excellent specimen of active inflammation of the synovial membrane of the knee-joint; showing destruction of the soft parts, cartilages, &c.

From a woman 72 years of age, who had been subject to frequent attacks of erysipelas in the face and superior extremities. She had also, during the last nine months of her life, been afflicted with inflammation of the synovial membrane of the left elbow-joint. Although active treatment had been employed the joint became enlarged; and an abscess formed beneath the integuments, a little below the head of the radius, which was opened and gave exit to a large quantity of pus.

Abscesses also formed in the fore-arm, which were opened. After this the left knee became extremely painful; the integuments inflamed; and the joint gradually increased in size, in spite of local and general treatment. The pain in the joint was so distressing as to require large doses of the liquor opii sedativus to lessen her sufferings. Febrile symptoms came on, accompanied with frequent rigors; and the patient became extremely restless and anxious. As there was no probability of saving the life of the patient, I thought it expedient to make an opening into the capsule, and nearly three pints of fœtid pus, with a fluid like thickened synovia escaped. All the symptoms after this subsided for nearly a month; the aperture closed; the capsule however re-distended; the former symptoms recurred; and another opening was made with the same mitigation of suffering. The discharge continued for a considerable time; at last the action of the flexor muscles of the thigh became very powerful, and the knee-joint was bent. Irritative fever ensued, and she died.

The liver was very large, of a pale yellow color, exceedingly firm in structure, and granulated. The gall-bladder was filled with viscid bile; the spleen was large, and solid in structure. The mucous glands of

the ileum and cæcum were enlarged, and the vessels of the surface of these intestines congested. The thoracic viscera were healthy; the coats of the aorta were ossified.

On examining the diseased elbow-joint, it was seen that the whole of the soft parts and cartilaginous coverings had been destroyed, as were the ligaments and the capsule; lymph had been deposited, which had become organised, and formed slight adhesions.

The thigh and leg were removed, and the arteries injected with size and vermilion.

On cutting open that part of the knee-joint which originally formed the capsular ligament, scarcely a vestige of its natural structure could be seen, from the ravages of ulceration. The cyst, if so I may call it, had extended upwards on the anterior part of the thigh, to the distance of six inches above the condyles, and had caused a separation, and partial absorption of the cruræus and vasti muscles, exposing the periosteal covering of the femur, which was highly inflamed.

The internal surface of this cyst seemed to be formed principally of the cellular tissue of the capsular ligament, which was in a sloughy state. Nearly the whole of the cartilages which covered the condyles and the head of the tibia were absorbed; only a few portions remained, which were extremely thin. The semilunar cartilages, as well as the crucial and lateral ligaments were destroyed.

The articular surfaces of the bones were highly inflamed, and the ulcerative process had commenced in them. The cartilage of the patella was absorbed, together with the head of the fibula.

The posterior tibial, and interosseous arteries were obliterated by lymph.

The bones were minutely injected; but there does not appear any sign of vascularity in any of the remaining cartilages.

From the bad state of health of this patient, and her advanced age, I did not think it prudent to propose amputation. In a case of considerable effusion of synovia into the capsule of the knee-joint in a healthy young person, I should not hesitate in making an opening into the joint, which might prevent

the necessity of amputation. This I have done in three cases with success, the joint uniting in a straight line.

On examining capsular ligaments which had been greatly distended by pus or synovia, I have noticed that the natural internal structure was greatly changed; which may probably account for its being less sensitive than in the healthy state; consequently an opening into it in such cases, is not so likely to be followed by any bad effects.

249 A portion of bone showing necrosis.

250 The knee-joint of a bullock. The whole of the soft parts, and the cartilaginous coverings, &c. had been completely destroyed, and perfect ankylosis has been effected, in a bent position. The external surface of the joint is thickly surrounded by very solid processes of bone, presenting a rocky appearance. A section of the bone is made to exhibit the perfect state of ankylosis.

This is the best specimen of the kind I ever examined.

251 Knee-joint of a bullock. The whole of the natural internal structure of the joint had been destroyed. Ankylosis has taken place in a bent position; but the osseous union is not complete. This would have been effected in time, as an immense quantity of very solid bony matter has been formed round the joint.

The two last preparations exhibit beautifully the wise provision adopted by nature to effect a cure, even in the brute creation.

252 Dislocation of the ankle-joint. From a man; attempts had been made to save the limb for a fortnight after the accident, but without success.

Inflammation in the joint came on, accompanied with great pain, and swelling of the foot and leg; and there was a considerable discharge of pus; fever supervened, and the leg was amputated. The whole of the soft parts, cartilages, and ligaments, were absorbed.

253 The inferior portion of a tibia. The joint had been affected with chronic inflammation for a considerable time, which caused absorption of the soft parts of the joints, and the cartilages. In consequence of the approximation of the surface of this bone with

- the astragalus, and the motions of the limb, the surfaces have become hardened and polished.
- 254 The inferior part of the tibia and fibula. The articulating surfaces are destroyed by ulceration, occasioned by a severe injury to the ankle-joint. The leg was amputated.
- The bones are light and soft, as in scrofula; a considerable portion of the fibula shows signs of caries.
- 255 Tibia and fibula of a woman. The structure of the soft parts, and the cartilages of the ankle-joint have been destroyed by chronic inflammation.
- Periostitis had taken place near the inferior end of the tibia at its inner edge, and extended upwards for nearly two inches. Exostosis succeeded, which had destroyed the interosseous ligament, and the periosteal covering of the fibula; and complete bony ankylosis has been effected. The end of the fibula is covered with bony matter, as was its head.
- 256 Part of the foot of a boy. The integuments mortified in consequence of a carriage wheel passing over the ankle-joint and consequent laceration; it was necessary to amputate the leg. The patient soon recovered.
- 257 Bones of the ankle-joint, and part of the tarsal bones. The ankle-joint is completely ankylosed by osseous matter, as are the tarsal bones. The tibia and fibula are affected with caries.
- The fibula is united by bone to the inner surface of the tibia; and there is a process of bone between the tibia and fibula, in the situation of the interosseous ligament. This is a curious specimen; it was found in a burial-ground.
- 258 Part of the bones of a foot of a young man affected with scrofula. Some of the metatarsal bones were diseased, and they were removed. The wound did not heal; and there was a considerable discharge of pus. Some months after this operation, the knee-joint was attacked, and the disease made rapid progress; his health became so affected, that amputation above the knee-joint was thought necessary.
- The patient died of phthisis pulmonalis.
- Most of the cartilages of the tarsal bones had been absorbed; the osseous structure was very soft, and the cancelli contained caseous matter. The foot was

injected; the integuments covering the bones were colored with the fluid, but the ulcerated part did not show any signs of granulation.

259 Bones of the knee-joint of a man. From chronic inflammation, ulceration of the soft parts, with absorption of the cartilaginous substances, and destruction of the ligaments, the condyles of the femur had approximated in a straight line with the head of the tibia; and the surfaces had become polished. The bones healthy.

260 Bones of the knee-joint of a man. All the soft parts, cartilages, ligaments, &c. were destroyed. The bones are remarkably thin and soft; and the cancelli filled with caseous matter.

The leg was amputated; the patient died of phthisis pulmonalis.

261 The knee-joint and leg of a man, showing extensive exostosis, which produced ankylosis. The bony growth had surrounded the popliteal artery, and vein; had nearly obliterated them, and had compressed the popliteal, and fibular nerves. The arteries and veins were injected with wax, &c. From a man 45 years of age, extremely muscular, plethoric, and with a hale constitution; who had been several years in the army. He informed the gentleman whose care he was under, that he received a blow on the knee, which gave origin to the disease. The enlargement of the joint had been making progress nearly five years, and various means had been employed to prevent the growth, but without effect. The knee-joint became ankylosed, the patient suffered severely from neuralgia, and at last was unable to attend to his business as a wheelwright. The knee joint was enormously large, and extremely irregular in figure; the veins of the leg became greatly distended, and symptoms of phlegmasia dolens supervened, which rendered it necessary to amputate the limb, a considerable distance above the diseased part.

The femoral artery and vein were extremely large; on loosening the tourniquet, there was profuse hæmorrhage from the femoral vein, which could not be suppressed, although a plug of lint was put into the orifice, and cold water applied for half an hour; it became at last necessary to apply a ligature. This

I always avoid doing, unless it is absolutely necessary; yet I have several times had occasion to tie veins, without any bad effects having been produced. The flap operation was employed; the stump healed almost completely by the first intention, and he soon recovered his health. The following are the appearances noticed on dissecting the limb.

The enlargement of the knee measured 19 inches in circumference; see cast of the leg, and the diseased bone.

Scarcely any of the muscular structure of the vasti muscles was visible; the fibres appear to have been converted into bone. The exostosis seems to have been produced by ostitis and periostitis, commencing in the head of the tibia, which had caused complete destruction of all the soft parts of the joint; and a large portion of newly formed bone occupies its cavity, as is seen in the preparation.

Large masses of osseous matter are also formed on the internal and external edge of the head of the tibia, over the head of the fibula, and to some distance beyond it; which had, with other deposits, occasioned ankylosis of the joint in a straight position. Irregular ossific productions are also seen on the anterior surface of the femur, about two inches from the centre of the condyles, and for some distance beyond; and on each side of the thigh-bone, immense masses of rocky-looking bone are formed, which project to a considerable extent, they likewise extend to the ham, and beyond the posterior surfaces of the head of the tibia and fibula. These growths had displaced the blood-vessels and nerves in the ham, which were impacted in the disease, and so greatly compressed, that in a short time the femoral artery and vein would have been completely obliterated, and the leg must have mortified. All these appearances are well shown in the preparation. The arteries, veins, and nerves, are preserved; the deep veins are greatly enlarged. Examination of the leg showed evidently the cause of the neuralgic symptoms, and the enlargement of the external and internal veins.

This patient continued in good health for nearly five years from the time the amputation was performed,

and had used a wooden leg: when pain was felt in the stump, which he imagined had been occasioned by some imperfection in the instrument. Means were employed to prevent the mechanical irritation, but without effect; he suffered painful sensations in the part, and an enlargement on the inner surface of the thigh-bone, above the base of the stump, was felt. Various means were tried to prevent, if possible, the growth of the bone, but to no purpose. The neuralgic affection increased; he suffered from severe spasms at the end of the stump; and his health became disordered.

There not appearing any chance of checking the morbid action, I advised another operation, which he readily consented to. The shortness of the thigh rendered a tourniquet useless; the femoral artery was therefore compressed on the body of the os pubis by a well constructed instrument, entrusted to a good assistant.

I performed the flap operation, and with a hope of preventing the recurrence of the disease; the thigh-bone was sawn through, a short distance from the inferior part of the trochanter major. It was found necessary to tie seven arteries; the femoral vein (as in the first operation) bled so profusely, that I fully expected I should have occasion to apply a ligature around it also. But as I was anxious to avoid doing this, I plugged up the end of the vein, and applied cold water to the surface of the stump for an hour, which fortunately produced the desired effect; but by doing this, I nearly exhausted the patience of the poor sufferer, and the gentlemen who were present at the operation. Plenty of integuments were saved to cover the stump (which I believe to be all that is necessary in amputations), it healed almost completely by the first intention, and all the ligatures were separated in less than a fortnight. The patient sustained the second with as much fortitude as the former operation.

I sincerely hope the disease will not again recur; but it is well known that in all cases of exostosis of great magnitude, requiring removal by an operation, the result is not always favorable; as there remains a predisposition to the reproduction of the disease.

Appearances noticed on examining the stump. The asperities of the sawn bone were all removed by the absorbents; the medullary cavity was well defended by osseous depositions; and there were no spiculæ of bone, such as I have seen in bad stumps. The periosteal covering of that portion of the thigh-bone which was amputated was highly vascular; but the cancelli were perfectly natural in structure.

The osseous growth had its origin from the external surface of the periosteum, on the inner side of the thigh-bone, and extended posteriorly to a level with the linea aspera. The inferior part of the exostosis is (in the preparation) about an inch from the base of the stump; and the growth extends perpendicularly for about four inches in a line with the shaft of the bone, and transversely the same number of inches. The external part of the femur not having been affected, proves that the osseous depositions were the effects of periostitis. The bony deposits are extremely solid, and very irregular in figure; appearing like clumsy branches of coral.

The femoral artery at its extremity, and several of the branches given off by the profunda, also many veins were obliterated by coagulated blood, and fibrin; and the two branches of the ischiatic nerve* were greatly enlarged at their extremities, the whole having been surrounded and compressed by the osseous matter. The surfaces of these structures were thickly covered with cartilage which would ultimately have been converted into bone; and thus have increased the tumor.

Had this been the case, it would have been necessary to have removed the remains of the femur from its articulation.

262 Stump of a thigh with exostosis, &c. The particulars of this preparation are related in the history of No. 261.

263 Necrosis of the left portion of the inferior maxillary bone, showing a spontaneous fracture through its centre; caused by a diseased sub-maxillary gland.

A man 45 years of age, of a very delicate constitution, had an enlargement of the sub-maxillary gland, which gradually increased for nearly a year; it felt

* See the Preparation in the Section on the Nerves.

dense, and ultimately became painful and affected his health.

He was seen by several surgeons, and various modes of treatment locally, and generally, were employed ineffectually; the enlargement extended upwards into the mouth; the lining membrane and gums became affected, a fungous growth appeared, and the periosteal covering was destroyed. Several of the teeth came away, and spiculæ of bone at different times were removed by forceps. After this the integuments of the cheek sloughed, and formed an extensive circular opening, which produced an unsightly appearance, and the principal part of the parotid gland was destroyed. The patient had been several months in a hospital; the disease was considered of a malignant character, he was discharged incurable.

I was requested to see him, he was greatly emaciated, skin very sallow; was teased with a cough and diarrhœa; could scarcely swallow any nourishment, and had lost his voice for some time. The discharge from the sore was extremely fœtid; symptoms of irritative fever supervened, which caused death. The lungs were loaded with sero-purulent infiltration, and they contained a number of medullary tubera; there were several tubercles of the same kind in the liver; and the glandulæ aggregatæ were enlarged in the small intestines, especially in the ileum.

A considerable portion of the jaw is destroyed, and only one of the bicuspid teeth remains; there were only two teeth in the upper jaw; parts of the diseased sub-maxillary and sub-lingual gland are shown in the specimen, they are affected with carcinoma; some of the teeth which were shed are preserved, and the fangs exhibit the signs of periostitis.

264 Fractured tarsal bone of a guinea-hen, firmly united by osseous matter; a section is made through the bone.

265 Knee-joint of a sheep, the synovial membrane is thickly coated with lymph; the cartilaginous coverings are not affected.

266 A portion of the capsule of the knee-joint, with the patella, &c. showing the effects of active inflammation, and sloughing.

A man in stitching a shoe, ran the point of an awl into the knee-joint; violent pain and inflammation came

on, in the course of a week after the accident ; leeches and fomentations were employed.

He was admitted into a hospital, where every endeavour was employed to subdue the inflammatory action, but without producing the desired effect. The pain in the joint was very distressing ; the knee became enlarged, the integuments extremely hot, and inflamed ; irritative fever came on, and the patient died.

Inspection. The arachnoid membrane, and the pia-mater were highly inflamed ; and there was a serous effusion between them ; the substance of the brain was also inflamed, and there was more fluid in the ventricles than natural.

- 267 Section of the femur of a fowl, showing the cancelli, and a spiculum of bone on the middle of the external surface.
- 268 Femur of a partridge, with an oblique fracture, which is united by bone. There is also in the same bottle the stump of a leg, which has healed perfectly ; the muscles of the thigh are shown.
- 269 Section of the femur of a parrot. The medullary canal is shown ; and in consequence of osseous matter having been thickly deposited on the bones, beyond the fractured portions ; the ends are greatly separated, as is seen in the preparation. There is in the same bottle, the humerus of a bird, with an oblique fracture united by bone.
- 270 Part of the great toe of a man who suffered various severe attacks of acute rheumatism ; the synovial membrane of the joint was highly inflamed, in parts ulcerated, and the cartilages partially absorbed. Two of the ossa sesamöidea are shown.
- 271 A finger, the theca of the flexor tendons is so much thickened by inflammation, as to bend in an angle the second joint ; the patient suffered great pain in the part, and at her request I removed the finger.
- 272 Osseous tumour growing from the theca of the toe.

SECTION IV.

Normal Anatomy of the Heart.

- 273 A large heart injected with wax.
 - 274 A heart injected with wax.
 - 275 A heart injected with plaster of Paris.
 - 276 A heart injected with wax.
 - 277 Heart of a still-born infant, injected, the foramen ovale shown.
 - 278 Heart, lungs, and thymus gland of a fœtus.
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Abnormal Anatomy of the Heart.

- 279 Heart and lungs of a child. The infant lived only twelve hours from the time of its birth.
The skin during life was of a very deep purple color, the temperature as cold as that of a frog, and its breathing very laborious.
On inspection the lungs were seen to be more solid than those of a child which had never breathed; and they sunk in water.
A section of one of the lobes showed that the structure was nearly as dense as hepatised lung; which seemed to be occasioned by the air cells not having been properly expanded at the time of birth, and by an effusion of blood into the parenchymatous structure.
The pericardium contained about three tea-spoonsful of water mixed with blood; the muscular structure of the heart was extremely red, as if inflamed, and the lining of the auricles and ventricles was of a very bright red color, as was the internal coat of the aorta and pulmonary artery. The ductus arteriosus and foramen ovale were very capacious.

Might not the morbid changes have existed previous to the birth of the child?

- 280 Heart of a boy 8 years of age. Showing the natural external appearances, the remains of the ductus arteriosus, and the Eustachian valve: the foramen ovale was not completely obliterated.

The patient died from the effects of acute hydrocephalus, on the thirteenth day from the commencement of the attack.

- 281 A portion of the right auricle and ventricle of the heart with the foramen ovale widely open, and the internal surface of the auricle greatly thickened by coagulated lymph; the valve of the coronary vein is shown in the preparation. The patient had suffered severely from the effects of acute rheumatism; he died suddenly.

There was a considerable quantity of water in both sides of the chest; the pleuræ and the lungs were inflamed; and there were about four ounces of fluid in the pericardium.

- 282 Heart of a boy 8 years old, the cavities are very large, and the muscular structure very firm. There were nearly three ounces of water in the pericardium.

The foramen ovale is widely open; valvulæ mitrales shortened and thickened; the Eustachian valve extensive and reticulated. The aorta and its vessels are very large; the sigmoid valves of this vessel and pulmonary artery are thickened; but those of the latter are affected in a less degree. From birth he had all the signs of hydrocephalus, with symptoms denoting mal-formation of the heart; his lips were of a purple color, skin rather cold; pulse full and irregular; these signs were attended with dyspnœa. He was attacked with pertussis, and although active treatment was employed, convulsions came on, and he expired in one of the paroxysms.

The head was immensely large; the arachnoid membrane and pia mater were greatly thickened, and a milky fluid was effused between them; the vessels of the brain were surcharged with blood, and the structure of the cerebrum was remarkably dense; the septum lucidum and fornix were softened; and there were four ounces of fluid in the lateral ventricles, the third ventricle being dilated with water, which pro-

duced pressure on the optic nerves. The lungs were partly hepatised; there was water in both sides of the chest; and a considerable quantity in the abdomen. The liver was of immense size, very firm in texture, and looked like yellow soap; the gall-bladder was filled with very bright yellow colored bile; the spleen large, and firm. The mucous glands of the small intestines were greatly enlarged.

The preparation of the brain is in the museum of the Royal College of Surgeons, with some other specimens of disease of the base of the brain, exhibiting the effects of pressure on the optic nerves in hydrocephalus internus; which had produced amaurosis.

283 A very large heart. The patient, a girl 14 years of age; died from the effects of pleuro-peripneumonia; the pleuræ were thickly coated with lymph; the lungs were hepatised, and there was a considerable quantity of water in both sides of the chest. The pericardium contained about two ounces of fluid; the coats of the aorta and pulmonary artery, the muscular structure of the heart, and the lining of the auricles and ventricles were inflamed. The parietes of the left ventricle rather thick and firm in texture; the cavity aneurismal: the carneæ columnæ thick and short; the mitral valve dense. The foramen ovale open, which had in all probability remained so from birth.

284 Heart, and a portion of lung. From a child about 8 years of age; the heart is large, the left ventricle thick, and its cavity very small; the lining of the auricle greatly thickened, the mitral valve affected; the foramen ovale open, but not to a great extent. The pleura and lungs highly inflamed, and some of the lobes hepatised. There was water in both sides of the thorax; the abdominal viscera healthy.

285 Heart of a child twelve months old.

The child was born between the sixth and seventh month, and was extremely delicate and diminutive; it lived only twelve months; and at the end of this period was not more developed than at birth. The head was very large, the anterior fontanel remarkably wide, and the pupils of the eyes much dilated; all symptoms denoting hydrocephalus

internus. The bowels were irregular, the skin and lips of a purple color; about a week previous to death, the child was attacked with pneumonia. There was a considerable quantity of fluid in both sides of the chest; the lungs were hepatised, and the bronchial tubes filled with pus. The heart was very large for the size of the child; the auricles and ventricles were very capacious, parietes rather thin. The foramen ovale was open to a considerable extent, as is shown in the preparation, by a black bristle. The valves natural, the aorta of a moderate size, but the vessels at the arch remarkably large; the ductus arteriosus was closed. A portion of diseased lung is shown.

- 286 Heart of a boy, 10 years of age. From birth he had symptoms denoting mal-formation of the heart; he was a complete *cæruleus*; pulse generally very full and irregular. About a fortnight previous to his death, he had a severe attack of scarlatina; *purpura hæmorrhagica* appeared nearly all over his body; this condition was followed by hydro-thorax and ascites. In both sides of the chest there was a considerable quantity of serous fluid; and the lungs were *œdematous* and partly hepatised. There were four ounces of fluid in the pericardium; the heart was remarkably large, and presented a very irregular appearance; its apex was very obtuse.

The parietes of the left ventricle were thick, the cavity capacious, the mitral valve and lining of the auricle greatly thickened, the result of chronic inflammation.

At the superior and central part of the septum ventriculorum, there is an imperfection or aperture, about the size of a shilling, allowing of a free communication between the two ventricles.

Two of the aortic valves adhere very firmly at their superior part; they are all slightly thickened, and there are some small excrescences at their edges. The aorta is very large, as are the coronary arteries, and their coats are highly inflamed.

The foramen ovale open, the fossa ovalis deep, are shown by a black bristle. The ductus arteriosus closed.

The parietes of the right ventricle are thick; the cavity large; the tricuspid valve and lining of the auricle thickened; the pulmonary artery large, with coats inflamed; the valves dense; there are several

small excrescences on their edges. The muscular structure of the heart was inflamed.

The liver large, of a pale yellow color, and slightly granulated; the spleen large, but not diseased.

This is a very remarkable specimen of mal-formation of the heart; it is surprising the patient lived so long.

- 287 Heart of a child 6 months old, who died from pneumonia. The structure of the lungs was inflamed, and some of the lobes were consolidated; there was fluid in both sides of the chest. The pericardium contained about half an ounce of serum, it was inflamed as were also the serous covering and muscular structure of the heart: the foramen ovale was widely open, the ductus arteriosus closed.

- 288 Heart of a child, 13 months old. The child for nearly two months suffered from cough and difficulty of breathing; it died suddenly. The pleuræ and external surface of the pericardium were coated with coagulable lymph; there was fluid in the thorax on both sides, mixed with flakes of lymph, and the lungs were partly hepatised.

The pericardium contained a considerable quantity of water mixed with coagulable lymph. The bag of the pericardium and the reflected portion covering the heart showed all the appearances of pericarditis. The foramen ovale was very large. The abdominal viscera were healthy.

- 289 Heart of a girl 7 years of age. This child from its birth had cough and difficulty of breathing; about the second year of its age the color of its skin was observed to be much darker than natural, and its hands and feet always cold. Those symptoms gradually increased, the child became extremely irritable; and a fortnight previous to its death it was seized with variola; on the 7th day petechiæ appeared. The pleuræ on both sides of the chest adhered firmly, the lungs were consolidated, and the bronchial tubes and trachea highly inflamed. There were about two ounces of fluid in the pericardium. The heart was large, the parietes of the left ventricle thick, and the cavity large; the mitral valve dense, the aortic valves thickened, and fringed with small excrescences on their sides. The foramen ovale, and ductus arteriosus both open. The aorta and vessels of the

arch large. The parietes of the right ventricle nearly as thick as those of the left ; the cavity small ; the pulmonary artery and its two branches extremely small, the valves healthy.

A piece of green colored glass shows the foramen ovale. The uterine organs were very small, and there were scarcely any signs of ovaria. In one of the small intestines there were four volvuli, which were most likely formed a short time previous to the death of the patient.

- 290 Heart of a boy 10 years of age. History of the case not known. The lungs on both sides of the chest were highly inflamed, and the bronchial tubes and trachea filled with sero-purulent secretion. There was a considerable quantity of fluid in the pericardium, and it, as well as its reflected portion were highly inflamed, as was the structure of the heart, and the internal surface of the auricles and ventricles ; which appearances are preserved in the preparation. The parietes of the left ventricle are very dense, the mitral valve and auricle thickened by chronic inflammation ; the corneæ columnæ large. The foramen ovale and ductus arteriosus open. The aorta large, and the vessels at its arch ; coats inflamed. The parietes of the right ventricle are rather thin, the cavity small, the tricuspid valve slightly thickened, the pulmonary artery very large, its coats inflamed, the valves opaque. There are only two arteries given off from the arch of the aorta, and their caliber is small for the size of the heart. The trunk of the arteria innominata is short, it gives origin to the right subclavian ; the left carotid is nearly the size of the innominata, and it gives origin to four different sized arteries ; one I suppose to form the left subclavian, but as I did not examine the body, I cannot satisfactorily state the names of the other three vessels ; perhaps the two vertebrals, and the inferior thyroid.

Morbid Anatomy of the Pericardium and Heart.

- 291 A heart showing the incipient stage of pericarditis: the structure is very soft, the parietes thin, and there is an extensive accumulation of fat beneath its serous covering.
The lining of the auricles and ventricles was inflamed: the aortic valves at their edges slightly thickened. The patient was 58 years of age. The left side of the chest was filled with pus, the two lobes of the lung were completely flattened, and pressed against the external surface of the pericardium.
- 292 Heart showing pericarditis, the effect of acute rheumatism. The cavities and valves are shown.
- 293 A heart showing the early stage of pericarditis, also the white spot of Baillie on the right ventricle. This is merely a slight thickening of the natural serous membrane of the heart, and not the result of morbid action.
- 294 Heart showing pericarditis—injected. The patient, a gentleman 46 years of age, had lived intemperately. For several years he had been afflicted with symptoms denoting a diseased liver; about 12 months previous to his death, he was troubled with a dry cough, dyspnœa sicca, and symptoms of organic disease of the heart supervened, which gradually increased in violence. For about three months before his dissolution, the patient was dreadfully distressed with a pain in the ulnar nerve (in the situation between the internal condyle and the olecranon) which frequently deprived him of rest, and which was considered to be *tic douloureux*. Various modes of treatment were employed by the physicians who attended him, without affording the least relief. So agonizing were his sufferings that it became a question whether the removal of a part of the nerve would be advisable; but as this would have perhaps only afforded temporary relief, the operation was not performed: effusion in the chest ensued, and he died.

The liver was of enormous magnitude, of a deep yellow color; its structure presented a granulated appearance, as if all the biliary ducts were surcharged with bile; and it felt soapy. The gall-bladder was greatly distended with viscid bile of a deep green color. The spleen was very large, and its structure remarkably soft.

In the right side of the thorax there were three pints of sanious fluid; the lobes of the lung were firmly agglutinated by organised lymph, and much flattened; the pleura costalis thickly coated with lymph.

The lung on the left side healthy. There were four ounces of yellowish fluid in the pericardium; its internal surface, and that reflected over the heart, highly inflamed, and lymph deposited, which was organised; firm adhesions had been effected, more especially, on the left side of the heart near the auricle and the root of the pulmonary artery. The left auricle and ventricle very capacious, the parietes of the latter rather thin. The mitral valve normal, except a few opaque spots near its origin. The valves of the aorta were natural, but a little above the origin of this artery the internal coat was, in points, ossified and the orifice of the left pulmonary artery surrounded by bone, which lessened its caliber. The right side of the heart normal.

This is a very valuable preparation.

- 295 Heart of a girl 15 years of age, minutely injected. Lymph deposited on the internal surface of the pericardium, also over its reflected portion, and an adventitious membrane formed.

The left ventricle large, parietes rather thick; the internal surface of the auricle condensed, also the mitral valve, but the aperture not constricted; the result of chronic inflammation. The foramen ovale open; the aortic valves and those of the pulmonary artery healthy. The aorta normal, the coronary arteries very large.

This is a very interesting preparation. History of the case not known.

- 296 Heart with complete union of both surfaces of the pericardium. A man 60 years of age; he died from the effects of typhus fever. There were very old standing adhesions in both pleuræ, and the lungs were in parts consolidated.

The structure of the heart was flaccid, but there were no signs of disease in the valves; the coronary arteries healthy. The internal coat of the thoracic aorta partly ossified, the abdominal portion converted into bone. The liver was very large, and its serous covering thickly covered with lymph, which was organised; the effects of chronic inflammation: the gall-bladder filled with a blackish-colored fluid.

The vessels of the brain turgid with blood; there was a considerable effusion of a milky looking fluid between the arachnoid membrane and pia mater, and the structure of the brain was inflamed, a fact I have frequently noticed on inspecting patients who had died from typhus fever at the early stage of the disease.

297 Heart showing acute pericarditis, &c. The patient was a man 45 years of age, who had lived very irregularly; he was very athletic. He suffered from hepatic disease for several years, symptoms of organic disease of the heart came on gradually, and at length became excessively severe, and caused hydrothorax. The pulsation of the heart was violent and extensive, and generally irregular; there was also distressing dyspnœa, great anxiety and irritability, with a bluish suffused countenance. There was a considerable quantity of water in each side of the chest. The pericardium adhered very firmly to the reflected portion by lymph, which was in great quantity, and organised. The cellular tissue connecting the muscular fibres of the heart was inflamed. The right auricle very capacious, and its internal surface highly inflamed; the ventricle healthy. The Eustachian valve extensive and reticulated; the left auricle large, its internal lining inflamed and partly ulcerated; the mitral valve greatly thickened. The ventricle of an immense capacity, the parietes natural; the coronary arteries and veins very large, but not diseased; the aorta normal.

There was a great quantity of water in the abdomen; the liver was of immense size, very firm in texture, and a considerable portion of its structure was destroyed by large granular productions, which were most apparent on the external surface of the organ; these appearances induced Mr. ABERNETHY to call

this condition the hob-nailed liver. The gall-bladder was filled with a black, deep-green-colored fluid ; the spleen was large and more dense in structure than natural ; the mucous glands in the ileum were hypertrophied.

- 298 Heart affected with chronic pericarditis. The patient a woman 46 years of age, lived intemperately, and had suffered several severe attacks of acute rheumatism, accompanied with pneumonia. After the last attack, symptoms of organic lesion of the heart came on, which became very distressing, and were succeeded by hydrothorax ; the legs became œdematous, and she died.

There was a considerable quantity of water in both sides of the chest, and the pleuræ were thickly coated with lymph. The pericardium contained four ounces of yellowish fluid, and was thickly lined by coagulable lymph, which in some parts had become organised and adhered firmly ; in some portions lymph was formed into large flakes, in other parts it presented a reticulated appearance ; resembling one of the engravings of the heart, in Dr. BAILLIE'S splendid work on Morbid Anatomy.

The muscular structure of the heart, the lining of the auricles and ventricles, and of the aorta and pulmonary artery were inflamed. The valves, &c. healthy. The lungs partly hepatised ; the bronchial tubes greatly loaded with mucus, and their internal surface inflamed. About six pints of water in the abdomen ; the liver was large and hard, and its structure granulated.

The gall-bladder contained a very dark-colored fluid. Spleen large and solid.

- 299 Heart affected with chronic pericarditis. The patient 19 years of age, a tall, delicately-formed person, had for nearly four years evinced signs of phthisis pulmonalis. About six months previous to his death symptoms of pneumonia came on accompanied with great difficulty in breathing ; these symptoms gradually increased, and he was occasionally attacked with syncope. Soon after this period the heart became affected ; he was annoyed with violent palpitation. The expectoration was muco-purulent, but never profuse, hectic fever supervened ; but, what is very singular

in this case, the emaciation of the body was not so great as we generally notice where phthisis has run through its different stages.

About a fortnight previous to his death, the mucous surface of the trachea and intestines became diseased; he lost his voice, and had symptoms similar to those in cynanche trachealis, and colliquative diarrhœa.

The adhesions of the pleuræ were so firm, as to render it necessary to remove the lungs and heart to examine them properly.

The lungs were completely filled with various sized scrofulous tubercles and vomicæ; the bronchial glands were affected with the same disease, and compressed the bronchi: the lining of the trachea was inflamed, the bronchi slightly ulcerated. The pericardium, extremely dense in structure, was distended with a great quantity of fluid mixed with large flakes of coagulable lymph. The internal surface of this membrane was thickly coated with organised lymph, the effect of chronic inflammation. The structure of the heart normal. In the substance of the liver there were a great number of scrofulous tubercles, and many of the mesenteric glands were converted into caseous matter; the mucous glands of the ileum and cæcum were enlarged, some of them ulcerated. The two last preparations are very interesting.

300 Heart of a lady 58 years of age. Symptoms denoting hepatic disease had existed for several years, she had also been troubled with a dry cough.

About three weeks previous to her death, she was attacked with symptoms of pneumonia, accompanied with acute pain in the region of the heart, and great difficulty in breathing; she was extremely restless, and her mind was greatly affected. The symptoms increased in violence, the pain in the chest was very distressing, and she died suddenly.

The left side of the thorax was completely filled with pus and large flakes of coagulable lymph; the two lobes of the lung were flattened. The pleuræ were thickly lined with coagulable lymph, which did not adhere firmly. There was also a large quantity of sero-purulent fluid with lymph in the right side of the thorax, and the lungs were partially hepatised; the pleuræ were thickly coated with unorganised lymph.

Nearly half a pint of pus was found in the pericardium. The heart did not exceed the normal size; the surfaces of the pericardium were thickly covered with coagulable lymph; the adhesions were more firm on the surface of the heart, than on the containing part. The internal surface of the auricles and ventricles was highly inflamed, also the internal coat of the aorta and pulmonary artery.

There was a considerable quantity of fat beneath the serous covering of the heart, the cavity of the left ventricle and its parietes were natural in size: the mitral valve was thickened, but the orifice was not constricted, the effect of chronic inflammation; a morbid change which is frequently seen in old subjects.

The right auricle and ventricle were natural in size, but the tricuspid valve was thickened, and the cellular tissue of the muscular structure inflamed. The aorta was of immense size, as was the pulmonary artery; the former appeared aneurismal.

The coronary arteries were also very large, but not diseased; the sigmoid valves of the aorta were slightly thickened at their edges; those of the pulmonary artery normal.

The liver did not appear to be much diseased; it was of a palish color, and felt soapy. The gall-bladder was completely filled with calculi of various sizes, 35 in number; the biliary ducts healthy. The spleen very large, its structure solid, and its capsule covered thickly with organised lymph.

The patient had never been married; the uterus was not more developed than one belonging to a girl 14 years of age; there was a small polypus on the right side of the os uteri; the ovaria very small, their surface granulated—no signs of the vesicles of De Graaf.

- 301 A portion of the left ventricle of the heart of a man 60 years of age, showing the effects of chronic pericarditis. He had for several years been afflicted with gout; during the last three years of his life he had cough and dyspnœa, with palpitation of the heart. About a fortnight previous to his death, he was attacked with a very severe paroxysm of gout, succeeded by metastasis to the heart, and he expired suddenly.

The pleura costalis and pulmonalis adhered very firmly on both sides of the thorax ; sections of the lungs showed the effects of sero-purulent infiltration.

The pericardium contained a considerable quantity of yellow serum mixed with flakes of very white coagulated lymph : the internal surface was thickly coated with organised lymph, which adhered very firmly, proving the effects of chronic inflammation ; and a dense adventitious membrane was formed over the reflected portion of the pericardium ; the lymph was remarkably white, and in many parts, superficially granulated. The abdominal viscera healthy. I have before noticed this singular appearance of the coagulated lymph in pericarditis, the effect of gout ; it certainly is very different in appearance to what we see in acute pericarditis under other circumstances. I cannot satisfactorily account for this deviation in the secretion of the lymph ; perhaps a practical chymist might.

302 Ossified pericardium, dried and preserved in spirit of turpentine. This morbid change is not often seen.

303 Heart of a boy 8 years of age, who died from the effects of inflammatory fever, accompanied with acute pain in the region of the heart. There was a considerable quantity of water in the pericardium, and the membrane was greatly inflamed. The muscular structure showed all the signs of carditis, and the lining of the auricles and ventricles and the arteries was highly inflamed. This was a case of arteritis that might possibly have been cured by bold depletion, &c.

304 Heart and lungs inflamed. A boy 12 years of age, very delicate, was attacked with cynanche trachealis ; the symptoms were very violent. He died on the sixth day from the commencement of the complaint. The pleuræ were highly inflamed ; the lungs hepatised ; there were also a great number of small tubercles in them, and beneath the pleura. The bronchial glands were converted into fleshy tumors, which were very vascular and compressed the bronchi. It is very singular, that there was a small vascular tumor in one of the pulmonary veins, which adhered very firmly ; a morbid change which I never before met with.

The pericardium contained about an ounce of water,

its internal surface was inflamed, as were also the muscular structure of the heart, the linings of the ventricles and auricles, and the coats of the arteries. The valves of the heart were normal. The internal surface of the trachea and bronchi was highly inflamed, but lymph had not been deposited.

There were small tubercles in the liver, and in the mesenteric glands. The tubercles, I have no doubt were congenital, and those in the lungs must have aggravated the inflammatory action produced by croup.

- 305 A portion of the left ventricle of a heart, showing two small lacerated openings near its apex. A man 47 years of age, very robust, and plethoric, experienced a very severe attack of acute rheumatism in the hands and feet, which was followed by metastasis to the heart, and caused violent palpitation, accompanied with excessive pain in the chest and dyspnœa. These symptoms increased in violence, and he expired suddenly, on the fourth day from the commencement of the attack.

The pleuræ and lungs inflamed. On opening the pericardium there was found a large quantity of fluid blood which had escaped from the cavity of the heart, by two small lacerations near its apex.

The heart was natural in size, and there were no signs of organic disease of old standing; but the serous covering, the lining of the auricles and ventricles, the muscular structure, and the internal coat of the aorta and pulmonary artery were inflamed. All the abdominal viscera healthy.

If the patient had been freely bled, I think his life might have been saved; but the physician who attended him, had unfortunately a great aversion to the use of the lancet in rheumatism or gout.

- 306 Heart. The patient a boy 17 years of age, with a lateral curvature of the spine, constitution very delicate. For nearly two years he had been troubled with cough and difficulty in breathing, and occasional attacks of pneumonia, which affected his health. Symptoms denoting disease of the heart came on, which gradually increased in violence; his legs became œdematous; the heart's action was very violent and irregular, and the dyspnœa distressing; in a

paroxysm of coughing hæmoptysis occurred, and he died suddenly.

In the right side of the chest there was a pint of bloody serum—on the left side there were firm adhesions between the pleura costalis and pulmonalis; the lungs were slightly congested with blood. The liver of a deep purple color, and all its blood-vessels gorged with blood; as were those belonging to the other abdominal viscera. There were three quarts of bloody serum in the abdomen.

The pericardium contained about three ounces of bloody serum; the left auricle greatly dilated, its parietes thick, and the internal coat thickened and granulated; the effects of chronic inflammation.

The margin of the auriculo-ventricular opening very dense in structure, and the aperture extremely small; the ventricle aneurismal, parietes hypertrophied.

The valves of the aorta and pulmonary artery were natural, but the internal coat of both these arteries was slightly thickened by atheromatous matter; a morbid change we do not often see in so young a subject.

307 Heart of a lady 63 years of age, of a very corpulent habit. She had been subject to palpitation of the heart during six years; accompanied with violent head-ache. She frequently complained of pulsation, and a singing noise in her ears; her sight diminished in power; pupils contracted; she was extremely nervous, and subject to attacks of syncope; the lips mostly of a purple color.

About twelve months previous to her death, the palpitation of the heart became more troublesome, the pulsation and noise in the ears increased, and her mental powers became affected. She died suddenly. The vessels of the scalp and pericranium as well as those of the cranium, were extremely turgid with blood; the arachnoid membrane lining the dura mater was inflamed, and slightly thickened by lymph, and that portion covering the pia mater was thickened by chronic inflammation. A considerable quantity of water mixed with coagulated blood was found between the pia mater and the external surface of the brain. The convolutions of the cerebrum were flattened, and the substance inflamed:

the ventricles of the brain contained a large quantity of water mixed with coagulated blood; but there was no lesion of the substance of the brain, such as we notice in sanguineous apoplexy.

The membranes covering the base of the brain were greatly thickened, and blood had been effused between the pia mater and the cerebrum, and between the latter and the cerebellum, similar to that noticed beneath the membranes covering the hemispheres. This hæmorrhage was discovered to have been occasioned by the rupture of an aneurism in the anterior, superior part of the basiliary artery, where it gives off the posterior cerebral arteries; it had lacerated the membranes at the posterior part of the infundibulum, and thus the blood was forced into the third, lateral, and fourth ventricles, the fornix and septum lucidum having been broken down by the force of the blood.

The carotids and anterior cerebral arteries were aneurismal, and on the right side an aneurismal sac would shortly have burst. The principal number of the arteries at the base of the brain were in a morbid state, and some were obliterated.

In the pericardium there were two ounces of fluid. The heart was large, and between its serous covering and the muscular structure there was a great quantity of fat. The auricles and ventricles were very large; the muscular structure not very firm, but did not approach that degeneration or softening which we sometimes notice, where the coronary arteries have been much diminished in caliber.

The left ventricle very capacious; its parietes extremely thick; the mitral valve slightly thickened by chronic inflammation; the fossa ovalis of wide extent; the edges of the bicuspid valve partly cartilaginous; the aortic valves cartilaginous at their bases. The aorta and vessels given off from its arch remarkably large, particularly the arteria innominata; the internal coat of these arteries was thickened with large patches of lymph, which had acquired nearly a cartilaginous density. The lining of the auricles and ventricles, as well as of the arteries, was of a brilliant scarlet color, which I should say indicated the incipient state of inflammation. The lungs greatly loaded

with blood and mucus ; several of the air cells, at some time had been ruptured, and formed large sacculi near the surface, similar to what we find in asthmatic patients.

The liver was remarkably large and the serous covering thickly coated with organised lymph, which adhered firmly ; the result of chronic inflammation. The substance of the liver was as dense as carcinoma, it was nodulated, and of a dark color ; scarcely any of the natural structure was visible, and the cellular media were greatly thickened. The gall-bladder was filled with a very dark, green-colored, thick fluid ; the biliary ducts healthy. The spleen large, its structure nearly as firm as the liver ; capsule cartilaginous.

The preparation of the base of the brain, with an aneurism in the basilar artery, is in the Museum of the Royal College of Surgeons, London.

308 Heart of a man 74 years of age. He had been distressed with difficulty in breathing, and palpitation of the heart for several years, which symptoms had increased in violence for six months previous to his death.

The pulsation of the heart and arteries was very powerful, and invariably irregular, his lips of a purple color ; he had all the symptoms denoting angina pectoris, more strongly marked than in any case of the kind I had ever seen.

His breathing was very difficult, his sleep interrupted by sudden startings, and frightful dreams ; the secretion of urine scanty in quantity ; his legs became œdematous, and he expired suddenly.

There were nearly ten ounces of serous fluid in the pericardium, and four pints of the same kind of fluid in the left cavity of the chest, and two and a half in the right. The lungs, with the exception of the enlarged state of the air-cells, were healthy, and their pleuræ free from adhesions. The heart was of an enormous size, from the magnitude of its auricles, and of the left ventricle, the parietes of which were very thin and soft.

The semilunar valves of the aorta were greatly thickened and shortened by cartilaginous and osseous deposits, and by organised lymph ; two of them were lacerated, which must have allowed of regurgitation

of the blood into the ventricle. It is very remarkable, that there were three coronary arteries, and they were not diseased, which satisfactorily shows that angina pectoris is not always caused by ossification, or any other morbid state of these vessels. The right side of the heart healthy. The liver granulated, it was of a deep yellow color, and felt soapy. Spleen large.

This patient had for several years been afflicted with a disease in the tibia and fibula ; several spiculæ were removed during his life.

- 309 The left ventricle of the heart of a man 73 years of age, he had been troubled with asthma and palpitation for several years ; during the last eight months of his existence, the symptoms became more serious, and signs of hydrothorax ensued. The pulse was generally intermittent, the breathing laborious, and he was occasionally attacked with paroxysms of dyspnœa, which threatened complete suspension of respiration. The heart's action was very powerful, and it could be felt extensively on the chest, and nearly as low as the umbilical region ; from his being so greatly emaciated, the abdominal aorta could be distinctly felt as far as the iliac arteries.

His legs and thighs became œdematous, the action of the heart more distressing, and he was deprived of life suddenly.

The pericardium contained six ounces of water ; the left ventricle was extremely capacious, the parietes remarkably thin, the muscular structure very flaccid ; (the passive aneurism of Corvisart.)

At the base of the left ventricle, close to the coronary artery, osseous matter had been deposited, which had caused a partial absorption of the ventricle and its internal lining. The aortic valves were only slightly thickened at their edges.

The aorta from its arch and through the whole of its course, was thickened partly by cartilaginous and partly by bony deposits ; the coronary arteries were very small, and their internal coat was thickened in a manner similar to that noticed in the aorta.

The right side of the heart normal. The liver in structure was (what is called) granulated. The spleen nearly the natural size, and its structure healthy.

310 Heart of a man 45 years of age. He had suffered for several months from symptoms denoting organic disease of the heart, which occasioned hydrops pericardii, of which he died.

The left ventricle extremely capacious; the parietes moderately thick; the semilunar valves of the aorta immensely thickened and considerably shortened by cartilaginous and osseous products. The right side of the heart was perfectly healthy. There were three coronary arteries; they were large in size, but healthy in structure. There was an accumulation of fat beneath the serous covering of the heart. The pericardium contained a pint and a half of water, and there was fluid in both sides of the thorax.

311 Heart of a man 40 years of age. The patient had been troubled with diseased liver a considerable length of time; he had also symptoms of organic lesion of the heart; ascites supervened, and he died.

The two surfaces of the pericardium were firmly agglutinated. The left ventricle was immensely dilated, but its parietes were not very thick.

The aortic valves greatly thickened and shortened, the coronary arteries remarkably large, but not diseased; the aorta, and the arteries given off from its arch were also so very large, that they might be termed aneurismal, and their internal coat was inflamed. The right auricle was much larger than natural; its parietes greatly thickened.

There were firm adhesions between the serous surface of the liver, and the anterior part of the peritoneum. The structure of the liver presented the nutmeg appearance, and was very dense. The gall-bladder filled with green-colored fluid. Spleen large.

312 Heart of a gentleman 55 years of age. For several years the patient had shown symptoms denoting hepatic disease; his countenance was sallow, and the conjunctiva yellow; his bowels were generally constipated, and he suffered from dyspepsia.

Symptoms denoting organic lesion of the heart progressively came on, which increased in violence; the breathing was laborious, accompanied with great anxiety of mind, and sometimes followed by a state of syncope, making him appear lifeless; in one of these paroxysms he suddenly expired.

The pulse was always so frequent and irregular, as to render it impossible to count the number of beats in a minute.

Although the body was inspected a few hours after death, it exhibited that green-colored appearance of the skin, and emitted the fœtor denoting decomposition, similar to that which is noticed in persons killed by lightning.

In the pericardium there was half a pint of bloody looking fluid; on the internal surface of this membrane, and on its reflected portion lymph was thickly deposited, and adhered firmly; the effects of chronic inflammation. The muscular structure of both ventricles of the heart was extremely soft, and inflamed, as was the lining of the ventricles.

The left ventricle was very capacious, its parietes thick; the carneæ columnæ and chordæ tendineæ very much enlarged, particularly the former; the mitral valve greatly thickened, but the opening was not constricted. The cavity of the right ventricle was also large, but its parietes were thin; the carneæ columnæ and chordæ tendineæ were slightly increased in size, and the tricuspid valve was more opaque than natural.

The semilunar valves of the aorta were ossified, particularly at their base, which must have impeded their function, and may account for the irregularity of the heart's action. The valves of the pulmonary artery were not diaphanous as they are naturally, but healthy in structure—there was a considerable quantity of water tinged with blood in both sides of the chest. The liver was large and granulated, its structure firm, and it appeared inflamed. The gall-bladder was distended greatly with a black viscid secretion. The spleen very large, firmer in structure than natural; the capsule partly cartilaginous.

The mucous coat of the stomach and intestines was surcharged with what appeared to be venous blood; the mucous glands not affected.

It appears quite astonishing how life could have been carried on for so great a number of years, with such a morbid state of the heart.

This is an unique preparation.

313 The left ventricle of the heart, and a portion of the

right ventricle of a woman 50 years of age. For several months previous to her death, symptoms of cardiac affection had existed, which were succeeded by hydrothorax, and œdema of the legs.

There were four ounces of water in the pericardium, which was highly inflamed, though lymph had not been deposited. The lining of the auricles and ventricles was inflamed, as were the coats of the aorta and pulmonary artery. In the right side of the chest there was a pint of water, and nearly the same quantity in the left; the pleuræ were inflamed, but lymph had not been effused—sero-purulent infiltration in the lungs had taken place, which made them feel œdematous. The bronchial tubes were loaded with mucus, and their linings highly inflamed, as was the whole tube of the trachea.

In the abdomen there were six pints of water. The liver was very large, and firm in texture, of a deep yellow color, and granulated; an appearance I have generally noticed on inspecting the bodies of gin-drinkers.

The gall-bladder was distended enormously with a deep green-colored secretion; its internal surface partly ulcerated. The cause of the distention of the gall-bladder was inspissated bile, which obstructed the cystic duct.

The preparation shows the following morbid appearances. The left ventricle large, parietes rather thick: the aortic valves considerably shortened and thickened by cartilaginous and bony substances, which must have impeded their function greatly; what is still more remarkable is, that there are four coronary arteries; it is the only specimen of the kind I ever saw.

314 Heart of great magnitude; the history of the case not known.

The left ventricle so greatly dilated, that it might be termed aneurismal; the mitral valve not affected, The sigmoid valves of the aorta (four in number) were considerably shortened and thickened by semi-cartilaginous and osseous matter, and their external surface and edges greatly thickened by excrescences which were organised. The right ventricle and auricle healthy, parietes thin.

The aorta was very small for the size of the heart, but

was not diseased, nor were the coronary arteries : the pulmonary artery natural. The remains of the ductus arteriosus are shown in the preparation.

- 315 Heart, immensely large. A girl 13 years of age, she had, from her birth, been subject to palpitation, and the most moderate bodily exertion caused great distress in breathing. These symptoms became gradually more urgent, and the action of the heart could be seen and heard at some distance, similar to what is noticed in an aneurism of the arch of the aorta ; there was no intermission of the pulse. About four months previous to her death, symptoms of hydrothorax came on, which were succeeded by œdema of the legs ; the heart's action continued very violent, the breathing was performed with distressing difficulty, and she expired suddenly.

In both sides of the chest there was a considerable quantity of fluid. The pericardium contained six ounces of serum.

The heart seemed too large for the chest ; I never saw one of such a size, in so young a subject. The pericardium was greatly condensed ; on its internal surface lymph had been effused, and it had become firmly adherent in parts, (particularly near the apex of the heart) to the reflected portion, which was covered with organised lymph ; there was a considerable quantity of fat beneath the serous membrane of the heart. The auricles were remarkably capacious, particularly the left, and its parietes were thick and muscular. The internal lining had lost its beautiful, smooth, polished appearance, and had become rough and thickened by chronic inflammation. The tricuspid valve was thickened, and one of the carneæ columnæ very large, and considerably elongated ; the edges of the sigmoid valves of the pulmonary artery were slightly thickened.

The parietes of the right ventricle were very thin, the cavity of immense size ; its structure highly inflamed, as were also the coats of the pulmonary artery.

The lining of the left ventricle was thickened, also the mitral valve, but the orifice was not constricted ; the carneæ columnæ large, the cavity of the ventricle immensely dilated, the parietes very thin, and the muscular structure extremely soft, and highly inflamed.

The aortic valves were inflamed, but not altered in structure ; the aorta and the vessels given off at its arch were remarkably small ; the internal coat inflamed. The fossa ovalis extremely large, the foramen closed ; and also the ductus arteriosus.

As the structure of this heart is natural, being only too large in size for the age of the patient, it cannot be denominated a congenital mal-formed heart.

The sister of this patient, 8 years of age, has had symptoms, ever since her birth, of an enlarged heart.

316 Heart ; the parietes of the left ventricle greatly attenuated, the cavity large for the size of the heart ; what CORVISART denominated *passive Aneurism*.

The ostium ventriculi nearly closed by the production of cartilaginous and osseous deposits beneath the serous covering of the mitral valve.

The semilunar valves of the aorta were also converted into bone, and the aperture nearly obliterated ; the internal coat of the aorta and coronary arteries was osseous.

It is quite astonishing how the circulation could have been carried on, with such impediments to the entrance of the blood into the ventricle, and its passage through the aorta.

I consider this preparation rare and very valuable. The history of the case not known.

317 Heart, extremely large, a portion of lung which was hepatised adhered to the pericardium.

The patient, a woman 33 years of age, had been troubled with symptoms denoting a diseased heart and liver, for nearly five years. Her lips and face were as blue as I have seen them in cases of malformation of the heart ; the heart's action was bounding and could be felt to a great extent ; it was generally irregular. She was teased with a cough, and great difficulty in breathing. Symptoms of icterus came on, which were shortly succeeded by ascites, and the accumulation of fluid was so considerable as to require the performance of paracentesis twice, merely to afford temporary relief, her breathing being performed with such distressing difficulty. Hæmoptysis came on, and she expired suddenly.

There were two pints of water in the right side of the

chest, and nearly the same quantity in the left. There were two pints of water in the pericardium, but not the least sign of inflammation of its internal surface, and no lymph deposited.

The right auricle of enormous capacity; the muscoli pectinati extremely large. The cause of the dilatation of the auricle, was a strictured state of the annulus venosus, its edges having been converted into cartilaginous and osseous matter, and the aperture formed into a fissure. The ventricle not altered in structure, but its parietes extremely thin; the valves of the pulmonary artery natural. The left auricle very capacious, parietes greatly thickened. The annulus arteriosus constricted by semi-cartilaginous and osseous depositions; the ventricle dilated, parietes thin.

The aortic valves were natural, excepting the corpora sesamoidea, which were converted into bone.

The aorta was very small, as were also the pulmonary artery and its two branches; but the arteries given off at the arch of the aorta were very large.

The lungs were loaded with sero-purulent infiltration, and were partly hepatised; from their flattened appearance, they seem to have been compressed by the heart, and water in the pericardium.

The liver was of an enormous magnitude; its edges rounded; structure granulated, and extremely soft; vessels surcharged with blood; gall-bladder distended with bile.

It is a rare occurrence to see disease in the right side of the heart, and it is difficult to account for the disproportionate size of the aorta and heart.

- 318 Heart, with an aneurism at the base of the left ventricle. From a woman 52 years of age, a dram-drinker; symptoms of diseased heart had existed for nearly two years; her breathing was performed with great difficulty, her lips were of a purple color; pulse quick and strong, but quite regular. Symptoms of hydrothorax came on, followed by ascites and œdema of the lower extremities, and she died.

There were nineteen pints of water, of a yellow color, in the abdomen.

The liver was of immense size, and granulated; its structure soft, and the blood-vessels were gorged.

The spleen was double the natural size, and its capsule partly cartilaginous; structure dense. There were firm adhesions between the pleuræ, on both sides of the chest, and also water in the cavities. The lungs were gorged with blood and water, and they felt œdematous. There were four ounces of water in the pericardium. The left auricle of the heart was greatly thickened by chronic inflammation; but the valvular structure was not affected; the ventricle capacious, its parietes thin; and at its base, near the aortic valves, there was a dilatation of the coats, forming an aneurism: but the greatest degree of dilatation was on the left side of the ventricle, and the coronary artery passed over the outer surface of the sac, as is exhibited in the preparation. The diameter of the aneurismal opening was about an inch; the sac had not protruded externally to a great extent, but if the patient had lived a little longer, the aneurism would most probably have burst into the pericardium.

The sac did not contain any coagulated blood, or fibrin; its internal surface was semicartilaginous; the aorta was cartilaginous; the coronary arteries were rather small, and their internal coat slightly thickened.

This is the only specimen of true aneurism of the heart I ever met with. It is very different from the active or passive aneurism described by CORVISART; in short I think the terms employed by that distinguished Pathologist are objectionable, but his description of the symptoms and appearances on dissection, are much to be admired.

319 A portion of the left ventricle and auricle of a heart, with the aorta and its valves. A woman 60 years of age, had for several years shown signs of a diseased liver, and also symptoms denoting organic disease of the heart, which produced hydrothorax and ascites, and caused her death. The left ventricle of the heart was rather large, the parietes thick, but the muscular structure very pale-colored, and flaccid.

The internal lining of the auricle semicartilaginous, greatly thickened by chronic inflammation, and in some parts ulcerated; the mitral valve considerably contracted. The aortic valves at their base in a cartilaginous state, but not much shortened; the coronary arteries and aorta healthy.

- 320 Heart of a man 60 years of age. For nearly five years previous to his dissolution he had symptoms of hepatic disease, and organic affection of the heart; ascites came on, followed by œdema, and he died gradually. There was water in both cavities of the chest, and his lungs were œdematous; there was also a considerable quantity of water in the pericardium, and in the abdomen.

The liver and spleen were diseased.

The heart was very large; its structure extremely soft, and inflamed, the left ventricle greatly dilated, parietes thick; the mitral valve healthy.

The foramen ovale remained open, which I have no doubt existed from birth. The semilunar valves of the aorta were ossified, particularly one of them, near the corpus sesamoideum; the aorta, at its origin was aneurismal, and the coronary arteries slightly ossified.

The valvular structure of the right side of the heart natural, but the parietes of the ventricle were extremely thin; the structure very flaccid.

- 321 Heart of a man 36 years of age, of a robust and plethoric habit. He had been afflicted with symptoms denoting organic disease of the heart for a considerable length of time.

The pulsations of the heart and arteries were so violent, as to induce the gentleman who attended him to imagine the existence of an aneurism of the heart.

The pulse very irregular; face and lips of a purple color; great difficulty in breathing, &c.

The pericardium contained half a pint of water; lymph was deposited on the containing and the reflected portion, but from not having been long effused was not organised.

There were three pints of water in the right side of the thorax, and nearly four pints on the left side.

The structure of the lungs highly inflamed; in some portions hepatised.

The ventricles of the heart, particularly the left, greatly enlarged, the parietes hypertrophied; the auricles not very capacious, but extremely muscular. The cellular tissue belonging to the muscular fibres of the heart, the lining of its cavities, and the internal coat of the arteries are inflamed.

The aortic valves thickened and shortened by chronic inflammation : the semilunar valves of the pulmonary artery are also thickened, which is a rare occurrence ; as we seldom find disease on the right side of the heart.

The mitral valve slightly thickened and the opening contracted ; the fossa ovalis was greatly expanded. The right auriculo-ventricular aperture of its normal size.

322 Heart of a man 65 years of age. He had been afflicted with diseased liver and heart nearly four years.

The mitral valve greatly thickened and shortened, and containing cartilaginous and osseous matter. The ventricle immensely capacious, and the parietes very thick. The right side of the heart healthy ; the coronary arteries very large, tunics ossified.

The semilunar valves of the aorta ossified, and shortened ; the internal coat greatly thickened by cartilaginous and osseous deposits.

There was a considerable quantity of water in the pericardium, and an adventitious membrane of considerable thickness covered the serous membrane of the heart ; the result of chronic inflammation.

There was a great quantity of water in the abdomen, the liver large, structure very yellow, and felt soapy. The gall-bladder distended with dark green-colored fluid : spleen large, its capsule cartilaginous.

Although the coronary arteries were ossified, the patient had none of the symptoms denoting angina pectoris.

323 Heart of a man 46 years of age. He had suffered severely for several months from symptoms of organic disease of the heart, which occasioned hydrops pericardii, of which he died.

The left ventricle very large, parietes thin, structure very flaccid ; the aortic valves thickened and shortened, and containing cartilaginous and osseous deposits.

324 The left ventricle of the heart, with the arch of the aorta. The patient was a tall man, 30 years of age. The liver had been in a disordered state for a considerable time ; his skin and conjunctiva sallow, and the urine small in quantity and high-colored. Symptoms of organic disease of the heart commenced,

which increased slowly, and he breathed with great difficulty. The heart's action became very powerful, pulse generally intermittent; symptoms denoting hydrops pericardii and hydrothorax came on, his legs were œdematous, and he died suddenly.

There were eight ounces of water in the pericardium: the left auricle and ventricle of the heart very capacious; the mitral valve containing osseous deposits of very irregular figure; the aortic valves partially thickened, but not to that degree to have impeded their functions. The gall-bladder was filled with inspissated bile of a deep-green color.

The liver was very large, solid in structure, and presented the hob-nailed appearance.

Adhesions of old standing subsisted between the pleura costalis and pulmonalis on the right side of the chest, in which about two pints of water were found: and nearly the same quantity in the left.

- 325 Heart rather small in size. A considerable quantity of fat deposited beneath the serous covering; hypertrophy of the left ventricle; structure very soft.

The mitral valve thickened by chronic inflammation, and slightly constricted; the lining of the left auricle also thickened.

The right ventricle very thin, and its structure remarkably soft; the tricuspid valve thickened. The foramen ovale open; the internal coat of the aorta slightly ossified, the lining membrane of the coronary arteries also ossified; they were very large. The history of this case is not known.

The symptoms and post-mortem appearances, would I have no doubt have been exactly similar to those I have described in some of my cases of diseased hearts.

- 326 Heart of a very old woman, its size very small. History of the case not known.

The internal lining of the left auricle greatly thickened by chronic inflammation, and the aperture of the mitral valve formed into a small narrow fissure, by the same morbid action. The cavity of this ventricle very small, the parietes hypertrophied, and the edges of the aortic valves slightly ossified.

The coronary arteries remarkably large for the size of the heart; they were partly ossified. The arch of

the aorta aneurismal, the internal coat considerably thickened by cartilaginous and bony deposits; and the semilunar valves slightly affected.

The pulmonary artery was nearly as large as the aorta, the valves natural.

What is very singular, the internal lining of the right auricle was thickened, and the ostium venosum constricted; the fossa ovalis was greatly expanded, and it appeared quite diaphanous.

- 327 Aortic and mitral valves diseased. A man 36 years of age, who had for several years suffered from severe attacks of acute rheumatism, and pneumonia, became troubled with palpitation, accompanied with difficulty in breathing, and an irregular pulse; symptoms denoting effusion into the chest supervened, and he died suddenly.

The lungs on both sides of the chest, bore evident signs of having remotely and recently suffered from the effects of inflammation; and in some parts they were hepatized. There was a considerable quantity of water in both sides of the chest, and about six ounces in the pericardium; its internal surface, as well as the reflected portion, were highly inflamed.

The heart was rather small in size, but its muscular structure, particularly that of the left ventricle, was very firm in texture. The mitral valve was partly cartilaginous and bony, and slightly contracted; the aortic valves were very large, and their edges partially constricted. It is very remarkable that there was only one coronary artery, but it was of a very large size, and gave origin to three branches of considerable magnitude. In other respects the heart was healthy, as were also the abdominal viscera.

- 328 Heart of small size. History of the case not known, but from the nature of the disease I should imagine the subject to have been very old.

The left ventricle greatly dilated, more particularly at its superior part, near the origin of the aorta; the parietes remarkably thin.

The left auricle greatly thickened, and the mitral valve converted into osseous matter of great density; the aperture was constricted into a small fissure. A similar change had also taken place in the semilunar valves of the aorta, and the fissure was exactly like

- that of the mitral valve. The coronary arteries were ossified. The right side of the heart was natural, but the parietes of the auricle and ventricle were thin.
- 329 A portion of the right and left ventricle of a heart, showing a carcinomatous tumor in the muscular structure, at a short distance from the external and superior surface of the right ventricle.
- 330 A portion of the right and left ventricle of a heart, showing a carcinomatous tumor in the muscular tissue, near the external and anterior surface of the right ventricle. There were several similar productions in the other viscera.
- I have met with only four specimens of malignant disease in the heart; one of these may be seen in the Museum of the College of Surgeons, London.
- 331 A diseased heart. The serous coverings are firmly united by lymph; structure of the heart soft, left ventricle capacious, aortic valves thickened by cartilaginous and osseous deposits. From a man 56 years of age.
- There was a great collection of water in both sides of the chest; the lungs were œdematous; the liver granulated; the spleen large and firm in texture.

Comparative Anatomy of the Heart.

- 332 The inferior portion of the right ventricle of the heart of an ox. The heart was immensely large, the surfaces of the pericardium firmly adherent.
- An abscess of considerable size had formed in the substance of the ventricle near its apex; the muscular structure was highly inflamed, and lymph was effused in great abundance. The cause of these morbid changes was found to have been, a large piece of twisted copper wire, which the animal had swallowed, whilst grazing, and which had perforated the œsophagus, and by progressive absorption had penetrated the pericardium and apex of the heart.
- In another case in a cow, I had an opportunity of seeing a large ten-penny nail which had passed through the first stomach, and had penetrated the left side of the diaphragm; and would in time, most probably have perforated the pericardium and the heart.

- 333 Part of the heart of a bullock. The whole weighed 9 pounds; the average weight is 5 pounds.
The serous covering of the heart, and the internal surface of the pericardium were immensely thickened by firmly adherent lymph. The arteries were remarkably large, as may be seen in the preparation.
The heart was perfectly healthy in structure, there was a great accumulation of water in both sides of the chest; the lungs were natural.
- 334 The heart of a sheep, of an enormous size; nearly as large as a small bullock's. Lymph had been deposited in great abundance in the bag of the pericardium and on its reflected portion, which had become organised; the substance of the heart was inflamed. The pleuræ on both sides of the chest were covered with coagulated lymph. The animal breathed with great difficulty for several months.
- 335 Heart of a young pig, showing the effects of chronic pericarditis. Lymph had been thickly deposited, and firm adhesion had been effected between the bag of the pericardium, and its reflected portion.
- 336 Heart of a kangaroo; the structure shown.
The heart is very small considering the size of the animal; and the arteries belonging to the arch are also small.
- 337 Heart, eye, and the section of a kidney, from the *myrmecophaga aculeata*.
- 338 Heart of a seal. The arch of the aorta is always very large in this animal, and appears at its origin aneurismal.
The ductus arteriosus and foramen ovale widely open.
- 339 Heart of a seal. The foramen ovale and ductus arteriosus widely open. I have examined a great number of seals, some of them full grown, and have invariably found the foramen ovale and ductus arteriosus widely open.
- 340 Heart and lungs of a tortoise. The tongue and œsophagus are shown.
- 341 Heart and lungs of the *boa constrictor*.
- 342 Heart of a large *squalus*, or shark. The structure shown, also the numerous rows of valves of the aorta.
- 343 Heart of a shark, structure, and various valves shown.
- 344 Heart of a small shark.

SECTION V.

ARTERIES AND VEINS.

Normal Anatomy.

- 345 A child, the arteries injected.
 346 A child, the arteries injected.
 347 A child, the arteries injected, sixth month.
 348 A child, 18 months old, the arteries injected, it was
 born with hydrocephalus.

The mother was delivered of three children; the two first-born were well formed, and at the full period of utero-gestation, they only lived two months; the other, from the immense size of its head, was obliged to be extracted with the forceps. The child was well developed in every other part of its body, and continued to thrive; but the head increased amazingly, and ultimately convulsions came on, which occasioned death.

The child measured in length 28 inches, its weight 19 pounds avoirdupoise.

Measurement of the head. Across the head between the ears, 15 inches, from the nasal process over the convex surface of the head to the foramen occipitale 18 inches. The forehead is greatly developed, which gives great character to the appearance of the child; the anterior fontanel widely expanded; the pupils of the eyes were blue. A trochar with a canula was introduced through the fontanel into the brain, three pints of water were drawn off; all the common bones of the cranium are greatly expanded, thickened, and highly inflamed.

- 349 Fœtal circulation.
 350 Fœtal circulation.
 351 Arteries of the thorax, abdomen and pelvis, injected;
 also the arteries belonging to the superior and infe-

rior extremities ; the lower portions of the arms and legs removed.

- 352 Head and neck of an adult, the arteries and veins injected ; the arteries belonging to the brain are exhibited, and the different processes of the dura mater.

From a woman ; this is a very valuable preparation.

- 353 Head and neck of an adult, the arteries injected on the right side ; on the left the bones of the cranium are shown.

- 354 A section of the head of an adult, the arteries injected ; the dura mater, septum narium, and ossa turbinata, also the parotid duct are exhibited.

- 355 Head and neck of an adult African. The arteries injected, and some of the nerves shown. He had been many times affected with the venereal disease, and several parts of his body showed the effects of this complaint. In the last attack he was salivated, and before the disease was checked, symptoms of phthisis pulmonalis came on, which caused death.

Inspectio. The lungs contained a great number of tubercles, and there were several excavations. The liver and mesenteric glands were affected with the same disease, also the mucous glands of the small intestines. On dissecting the head, the bones belonging to the superior part of the skull were in a carious state. Was this morbid change in the bones produced by syphilis, or by the imprudent use of mercury ? And might not the effects have excited into action the tubercles in the lungs, which probably had existed for many years, or from birth in a passive state, and which might have remained in the same condition for many more years.

I have frequently noticed the bad effects of mercury on those of a scrofulous diathesis.

- 356 Arm of an adult, the arteries injected.
 357 Arm of an adult, the arteries injected.
 358 Arm of an adult, the arteries injected.
 359 Arm of an adult, the arteries and veins minutely injected.
 360 Arm of a child, the arteries injected, the nerves shown.
 361 Arm of a child, the arteries injected.
 362 Arm injected.

- 363 Arm, the arteries injected.
 - 364 Arm of a child injected; the vessels are very large.
 - 365 Arm of a fœtus injected.
 - 366 A hand, arteries injected.
 - 367 A hand, arteries injected.
 - 368 A hand, arteries injected.
 - 369 A hand, the arteries injected, the nerves shown. The index finger was amputated at the superior part of the metacarpal bone, in a case of osseous paronychia. See the preparation of the finger, and cast of the hand.
 - 370 A hand, the arteries injected, the nerves preserved. This is a beautiful preparation.
 - 371 Part of the dorsal and lumbar vertebræ of an adult, with the pelvis; also the superior portion of the left thigh. The arteries and veins are minutely injected, and some of the parts concerned in hernia are shown.
 - 372 Section of a pelvis, with a part of the thigh. The internal iliac and femoral artery injected, the muscles shown. The obturator artery, and the circumflexa ilii are given off below Poupart's ligament by the arteria femoralis communis.
 - 373 Thigh and leg, the arteries injected. The tibia and fibula gibbous, the effects of rachitis.
 - 374 Thigh and leg, the arteries and veins are minutely injected. This is a beautiful specimen.
 - 375 Section of a pelvis, with a part of the thigh; the femoral artery injected.
 - 376 Part of a thigh and leg, the popliteal artery injected, the posterior tibial very large.
 - 377 Part of the pelvis and thigh of a child two years of age. The abdominal aorta, the iliacs, and femoral arteries injected with wax. What is very singular in this preparation is, the hypogastric artery is filled with the injection.
 - 378 Leg of a fœtus, arteries injected.
 - 379 Foot of an adult, the arteries injected.
 - 380 Foot of a child, the arteries injected.
- In this instance there were no signs of the anterior tibial artery, but the posterior tibial, the fibular, and interosseal, are very large.

Comparative Anatomy of the Arterial System.

- 381 A pug dog, the arteries minutely injected. The animal died in a convulsive fit. There was a large quantity of water in the ventricles, and the structure of the brain was softened; there were a great number of teniæ in the duodenum.
- 382 Pelvis and thighs of a dog. The abdominal aorta, external and internal iliacs, and femoral arteries injected.
- 383 Head and neck of a grey-hound, the arteries injected.
- 384 Hinder leg of a dog, the arteries shown.
- 385 Fore-arm of a cat, the arteries injected. The brachial artery passes through a foramen in the internal condyle.
- 386 The abdominal aorta, iliacs, and arteries belonging to the inferior extremities of a cat, injected.
- 387 Part of the thoracic, and the whole of the abdominal aorta, with the iliacs and femoral arteries, injected. The vena cava is injected. The kidneys and ureters are exhibited, also a portion of the bladder, the ureters and penis. The spermatic arteries are very large. From a young jackal.
- 388 Fore leg of a blood mare, the arteries injected, the muscles and tendons shown.
- 389 Fore leg of the same animal, the arteries injected; the muscles and tendons dissected.
- 390 Arch of the aorta, with the remains of the ductus arteriosus of a horse.

Morbid Anatomy of Arteries and Veins.

- 391 Artery and vein inflamed.
- 392 A portion of aorta inflamed. From a patient who died of phthisis pulmonalis.
- 393 Two portions of the thoracic aorta, showing inflammation and ulceration of the internal coat. The last three specimens, from a man 34 years of age, who had been afflicted with organic disease of the heart nearly two years. Effusion of fluid into the thorax and abdomen came on a short time previous to his death; there was considerable hæmorrhage from the lungs and intestines, and the integuments of most parts of his body were affected with purpura.

Inspectio. The heart was extremely large, the left auricle and ventricle very capacious; the parietes of the latter were very thick; the mitral valve healthy. The aortic valves were slightly thickened and shortened, and inflamed, and one of the coronary arteries was completely obliterated by lymph. The whole of the aorta was highly inflamed, and some portions of the internal coat ulcerated.

There were signs of purpura hæmorrhagica beneath the pleura pulmonalis, and the lungs were congested by sero-purulent infiltration. All the viscera of the abdomen surcharged with blood; the serous coats affected with purpura, and there was a considerable quantity of coagulated blood in the intestines. There was likewise a great collection of fluid in both sides of the thorax, in the pericardium, and abdomen.

This was a case of arteritis, excited by the magnitude and power of the heart's action; which probably might have been subdued by depletion and digitalis, if the heart had not been affected.

The specimens are preserved in alkohol.

- 394 Two portions of aorta, showing arteritis. From a man who died of typhus fever.
- 395 Inflamed arteries, taken from a patient who died in the incipient stage of typhus fever, at the fever hospital.
- 396 A portion of aorta, showing arteritis. The membranes and substance of the brain were highly inflamed. From a patient who died in the fever hospital.
- 397 A portion of aorta inflamed, and lymph deposited on the internal surface, which had become organised. From a man who died from the effects of acute rheumatism.
- 398 The arch of the aorta, with the thoracic and iliac arteries. The coats highly inflamed, the internal coat greatly thickened by coagulated lymph; in some portions presenting a tuberculated appearance; and in one part, this tunic is partially detached.

The sigmoid valves are also thickened, and slightly shortened; the arteries at the arch very large.

This is a state of artery likely to terminate in aneurism. The patient, a man 34 years of age, of a very plethoric habit, had suffered from the effects of acute rheumatism. There was water in the chest; the pleuræ inflamed; there was also water in the pericardium,

the heart large, its structure healthy. All the abdominal viscera natural in structure.

- 399 A portion of the right arteria carotis interna obliterated by organised coagulable lymph. A man 50 years of age; he died of apoplexy. The arachnoid membrane and pia mater greatly thickened, and there was an effusion of milky looking fluid between them; blood was effused in the middle lobe of the cerebrum. The ventricles contained about six ounces of water: the arteries at the base of the brain were ossified. There were scrofulous tubercles in the lungs and liver.
- 400 Aorta inflamed, the internal coat thickened by lymph.
- 401 Aorta, the internal coat immensely thickened by organised lymph, one portion partially detached by disease. The cellular coat removed to show the fibrous.
- 402 The internal coat of the aorta considerably thickened by lymph and cartilage; the external and fibrous coats were dissected off. Many of the main arteries in this subject were affected in a similar manner, some of them highly inflamed.
- 403 Arteries, showing the effects of arteritis, taken from a patient who died of typhus fever.
The membranes of the brain highly inflamed; the mucous surface of the intestines, and the glandulæ aggregatæ greatly hypertrophied.
- On inspecting the bodies of patients who have died at an early stage of typhus fever, I have generally found the membranes, and substance of the brain highly inflamed. In the Museum of the Royal College of Surgeons, there are two preparations from my collection, showing portions of a brain minutely injected; from a patient who died of typhus fever.
- 404 Aorta, pulmonary artery, and a portion of trachea highly inflamed, taken from a patient who died of typhus fever, in the fever hospital. The membranes and substance of the brain inflamed.
- 405 Iliac arteries. The arteries are greatly diminished in their caliber by the internal coat having been thickened, the effects of chronic inflammation; pus had also been formed between the fibrous and the internal coat; which had separated their cellular connection.

- 406 The inferior part of the femoral and the popliteal artery and vein, with a portion of the popliteal nerve. The vein obliterated by organised lymph; the artery healthy, and filled with firm coagulated blood, which did not adhere to the internal coat.
- The man from whom this specimen was taken, had been afflicted for many years, with disease in the tibia and fibula, which produced a foul ulcer on the shin; several spiculæ, at different times exfoliated; gangrena sicca came on, which rendered it necessary to amputate the leg.
- The arteries were all obliterated, so that it was not requisite to apply a ligature.
- The particulars of this case will be given in the description of diseased bones.
- 407 A portion of inflamed aorta, with cartilaginous depositions beneath the internal membrane; the external coat removed. The patient died of ascites; the liver was not diseased; this was a case of arteritis causing effusion, which might have been prevented by timely bleedings.
- 408 A portion of femoral vein, completely obliterated by blood, the effects of phlebitis.
- 409 Iliac artery and vein. The former inflamed, and lymph deposited on its internal surface; the latter completely obliterated by firmly coagulated blood and lymph. This preparation was taken from a patient who had carcinoma of the testicle; the inguinal, and other absorbent glands were affected with the same disease.
- 410 A portion of the thoracic aorta, showing the incipient change of the natural structure of its internal coat. In consequence of inflammation of the coats of arteries, lymph is effused between the internal and fibrous coats, which becomes organised; the internal coat becomes opaque, and is easily detached from the fibrous; and ultimately is converted into semicartilaginous or bony deposits; or other products, such as I shall describe in the history of some of the preparations.
- 411 Femoral artery and vein, showing coagula after amputation. Hæmorrhage came on a few days after the operation, and the patient died. The operation was performed at a hospital 24 years ago. A bristle is placed in the artery to show the ulcerated opening.

- 412 Femoral artery and vein, belonging to a stump. In consequence of too small a ligature having been applied to the artery, in the course of a week after amputation, the coats of the artery sloughed, and the patient died from hæmorrhage.
- The internal coat of the artery is perfectly healthy; there was no coagulum in the artery, but there is one in the vein.
- 413 Aortic valves ossified, dried and preserved in spirit of turpentine.
- 414 Aortic valve, with excrescences at the centre of the edge of the valve, and a spiculum of bone in the coronary artery.
- 415 Aortic valves, and a portion of the inner membrane of the aorta, slightly thickened by coagulated lymph. This morbid change of structure I consider the incipient stage of inflammation; the deposit would in time have undergone a change into cartilage, and eventually would have become ossified.
- There are four coronary arteries; the two on the right side much larger than those on the left.
- 416 Aortic valves, and those belonging to the pulmonary artery. The aortic valves thickened and shortened, by a deposition between their laminæ. One of the coronary arteries is obliterated; the other enlarged in caliber.
- The valves of the pulmonary artery healthy.
- 417 Aortic valves, slightly thickened by chronic inflammation. The aorta aneurismal, and its internal coat thickened by semicartilaginous and osseous deposits; the coronary arteries very large.
- 418 Arch of the aorta. The semilunar valves are slightly thickened by acute inflammation; the internal coat of the aorta is greatly thickened by coagulated lymph deposited between it and the fibrous tunic; lymph is also deposited on the internal surface in patches, which has become organised. One of the coronary arteries nearly obliterated by lymph; the other greatly enlarged.
- The vessels given off at the arch of the aorta are large, especially the arteria innominata.
- 419 Aortic valves, thickened and shortened by depositions of osseous matter between their laminæ, and the middle one ruptured; the internal coat of the aorta

ossified in patches ; the coronary arteries very large, but not diseased.

The patient 19 years of age, had violent palpitation of the heart, and irregular pulse, with great difficulty in breathing ; he became dropsical, and jaundiced, and died suddenly. There was water in both sides of the chest, and in the abdomen ; the liver was large, soft in structure, and deeply tinged with bile ; the gall-bladder greatly distended with viscid green-colored secretion.

- 420 Aortic valves, greatly thickened and shortened by osseous deposits ; the internal coat of the aorta also partly ossified ; the coronary arteries very capacious, and their internal coat slightly ossified. The patient, a man 60 years of age, had been afflicted for several years with symptoms of diseased heart and liver.

- 421 Aortic valves, considerably thickened and shortened by osseous matter between their laminæ. A portion of the sides of two of the valves had become agglutinated, and a large calcareous concretion had been deposited in this situation, which had caused the removal by absorption of portions of the valves.

The internal coat of the aorta partly ossified ; coronary arteries very large.

The patient, a man 34 years of age, had symptoms denoting organic lesion of the heart and lungs nearly 18 months.

The left ventricle of the heart of an immense size, the parietes greatly thickened, the auricle considerably dilated, and the auriculo-ventricular aperture constricted. The right side of the heart healthy. The pleuræ in both sides of the chest adhered firmly ; and the lungs were filled with miliary tubercles and vomicae.

- 422 Aortic valves, thickened and shortened by chronic inflammation ; there is an aperture in the middle one (which is shown in the preparation, by a black bristle) which is an occurrence occasionally seen in the aortic valves of young persons and adults, this imperfection I consider congenital, and not the result of any morbid action. In some instances two or three of the valves present the same appearances.

The internal coat of the aorta greatly thickened by chronic inflammation, and the coronary arteries nearly obliterated.

The history of this case not known.

- 423 Aortic valves, slightly thickened by bony deposits, and lymph had been deposited on the surfaces of the valves, which had become organised. The internal coat of the aorta was thickened by chronic inflammation, and small osseous patches; the coronary arteries were ossified, but their caliber not much diminished.
- History of the case not known.
- 424 Arch of the aorta, with its internal coat greatly thickened by coagulated lymph, and semicartilaginous and osseous deposits.
- The aortic valves shrivelled, the coronary arteries nearly obliterated, and the coats of the aorta near the base of the valves were dilated into small aneurismal sacs. There was a considerable quantity of water in both sides of the chest, also in the pericardium.
- The heart was extremely large, hypertrophy, with dilatation of the left ventricle. The liver was nodulated (cirrhosis), its structure dense.
- From an old subject.
- 425 The internal coat of the arch of the aorta very thick, from organised lymph, and cartilaginous and osseous deposits, like large tubercles. In some parts, portions of the inner membrane were partially detached from the fibrous tunic; this condition would have been followed by the kind of aneurism described by SCARPA, if the patient had lived much longer. The aortic valves were not much altered in structure.
- The history of this case is not known.
- 426 Arch of the aorta, with its internal surface highly inflamed, and partly destroyed by ulcerative absorption; and lymph deposited in great quantity between this and the fibrous tunic.
- The aortic valves are diminished in size, and thickened by chronic inflammation.
- The heart was very large, particularly the left ventricle, and the mitral valve slightly contracted. There was water in the pericardium, also in both sides of the chest, and the liver was diseased.
- 427 Arch of the aorta, with a portion of the pulmonary artery and branches, and the remains of the ductus arteriosus.
- The right subclavian artery, at its origin from the innominate, greatly lessened in caliber by an atheroma-

tous deposition between the internal and fibrous coats, which would shortly have been absorbed, had the patient lived. The arteries were inflamed.

- 428 Three preparations in one bottle, showing different stages of disease in the internal coat of the aorta and valves.

The First specimen displays a slight thickening of the edges of the valves, likewise of the internal coat of the aorta, but to a greater degree; the effects of chronic inflammation.

Second; a considerable thickening of the internal coat, from organised lymph, and semicartilaginous deposits of a very irregular figure between the internal, and the fibrous coats; some portions of the internal coat close to the valves had been absorbed.

Third, the aortic valves were converted into cartilage, and in two of them, near their edges, there was a good sized opening, similar to those which I have before described; there are also some organised excrescences on the valves.

The aortic valves ossified, and greatly diminished in size. From a man 75 years of age.

- 429 Arch of the aorta immensely thickened by organised coagulated lymph deposited between the two inner coats; the internal partly destroyed by ulcerative absorption, and the valves at their base slightly thickened.

- 430 Aortic valves completely ossified, greatly diminished in size, and altered in figure; on the centre there is a large calcareous deposit, consisting of granules loosely connected; which must have greatly impeded the flow of blood from the ventricle; the internal coat of the aorta partly ossified; the coronary arteries very small, and on one of these arteries a small concretion had formed, resembling in figure what is occasionally found in veins, named phlebolite.

- 431 Arch of the aorta, the internal coat greatly thickened by organised lymph, and cartilaginous deposits between it and the fibrous coat: the internal surface partly ulcerated. The arteries given off from the arch also diseased. The heart was large, and flaccid; the parietes of the left ventricle thick; cavity capacious, and the auricle greatly dilated. The aortic valves, and those belonging to the pulmonary artery were not much altered in structure.

There was a considerable quantity of water in the pericardium, and in both sides of the thorax. The patient was a man 50 years of age; the pulse was irregular, although there were not any of the causes to occasion interruption to the flow of blood, which are noticed when the mitral valves are constricted.

- 432 Arch of the aorta, with the internal coat partly ossified.
 433 Aorta, the semilunar valves greatly thickened and shortened by bone.

An engraving of this preparation is in Mr. HODGSON'S Work on the Arteries and Veins.

The patient, a man 31 years of age, had been troubled with cough and difficulty of breathing nearly a year; attended by palpitation of the heart, and irregular pulse; succeeded by hæmoptysis, which caused death.

The pleuræ on both sides of the chest adhered very firmly; one of the lobes of the lung on the left side was filled with coagulated blood (apoplexy) and there were about six ounces of water tinged with blood in the thorax. Half a pint of water tinged with blood was effused into the pericardium. The parietes of the left ventricle very thin, the structure soft, and cavity large; mitral valve normal.

The liver appeared healthy, but of an enormous size and its blood vessels were loaded with dark colored blood.

- 434 Arch of the aorta, with the remains of the ductus arteriosus.
 435 Arch of the aorta, the internal coat slightly thickened by coagulated lymph.

There are five arteries given off from the transverse arch. The remains of the ductus arteriosus are shown.

- 436 Aorta immensely dilated, particularly at its origin, arch, and descending portion.

The sigmoid valves and coronary arteries slightly ossified; the internal coat of the aorta, and vessels of the arch greatly thickened by dense cartilage and bone. The patient, a man 65 years of age, for upwards of twelve months had symptoms denoting an aneurism of the aorta; effusion into the chest supervened, and he expired suddenly.

There was a considerable quantity of serum in both

cavities of the chest ; the lungs were emphysematous, and some of the lobes were infiltrated with sero-purulent fluid.

The pericardium contained nearly six ounces of water ; the heart was very large ; parietes of the left ventricle very thick ; the cavity was very capacious, and the aperture of the mitral valve semicartilaginous. The liver was very large, but its structure appeared natural ; the veins gorged with blood, and the gall-bladder distended with a viscid green-colored secretion. The spleen was large, and more dense in structure than natural.

- 437 Aorta, the internal coat converted into cartilage and bone ; lymph had been deposited, and pus secreted between this and the fibrous coat, and some portions of the latter were destroyed by ulceration ; the external tunic highly inflamed. From a man 34 years of age, of a very plethoric temperament, who died suddenly.

Most of the principal arteries were remarkably large, and full of blood. The thoracic and abdominal viscera were healthy, but congested with blood.

- 438 Two portions of the thoracic aorta, showing inflammation and partial ulceration of the internal coat, with considerable thickening by cartilaginous and osseous deposits. One of the coronary arteries obliterated by lymph ; the aperture of the other only admitted a small bristle, which is seen in the preparation.

The patient, 34 years of age, had been affected with cough and distressing dyspnœa for nearly two years, also violent palpitation of the heart ; pulse full and very irregular ; lips purple. Symptoms of hydrothorax came on, succeeded by ascites, and about a fortnight previous to his dissolution, symptoms of purpura hæmorrhagica appeared on most parts of his body ; he had also hæmoptysis and intestinal hæmorrhage, and he died suddenly.

The heart was of a tremendous magnitude, its left auricle and ventricle very capacious, the parietes of the latter very thick. The aorta and pulmonary artery highly inflamed. The pericardium contained about four ounces of water.

The pleuræ on both sides of the chest adhered in parts very firmly, and there were two pints of water in both cavities.

The lungs partly hepatised, their structure inflamed, and one of the lobes on the left side was injected with florid blood, presenting the appearance denominated apoplexy of the lung.

There was about a gallon of water in the abdomen. The abdominal viscera were gorged with blood, and the serous surfaces affected with purpura. There was a considerable quantity of coagulated blood in the small intestines, and the villi were surcharged with blood; which accounted for the intestinal hæmorrhage.

- 439 A portion of lung, showing the effects of purpura hæmorrhagica; and a portion of intestine, showing great determination of blood to its mucous surface, from the same subject, will be found in their respective sections.

The last two preparations from the subject above described.

In this case, I believe that arteritis was the cause of all the morbid changes, which I think might have been subdued by bold depletion, &c. at the commencement of the attack; particularly as the viscera of the thorax, and abdomen, appeared to have been in a healthy state previous to the inflammatory action.

I have seen many cases of purpura hæmorrhagica without any disease of the heart.

- 440 Aorta, with the different coats shown. The artery was very large; the fibrous coat immensely thickened; osseous and cartilaginous deposits had formed between this and the internal coats. A portion of the fibrous tunic was absorbed. These, and other lesions give origin to aneurisms.

- 441 Aorta, with the coats shown; the internal membrane thickened by bone, and the apertures of some of the intercostal arteries obliterated.

- 442 Aorta, with cartilaginous and small osseous deposits between the internal and fibrous coats; the external removed to show the middle tunic.

- 443 Part of the abdominal aorta dried and preserved in spirit of turpentine, to show inflammation and bony deposits on the internal coat.

- 444 The abdominal aorta, from the origin of the superior mesenteric to its termination in the iliac arteries. The whole are very large; the internal coat is converted into dense cartilage and bone, and several portions

had been removed by the absorbents. The inferior mesenteric artery is very large, as are the renal arteries, but the caliber of the right renal is diminished by osseous matter. The right external iliac artery is greatly dilated, aneurismal. The cellular coat is reflected to show the fibrous coat; and in one part calcareous concretions have formed between them. The patient from whom this specimen was taken, was 84 years of age; his prostate gland was affected with carcinoma.

About three months previous to his death, he complained of excruciating pain in the chest; he was also affected with dry cough, and great difficulty of breathing; pulse very irregular, and the lips purple. In walking up stairs he suddenly fell down, and died.

There were firm adhesions of the pleuræ; the lung on the left side appeared as if it had been affected with melanosis; but on cutting into it, the structure was found to be extremely soft, and emitted a very offensive smell; which proved it to be in a gangrenous state.

The lung on the right side, presented externally, a dark color; which was produced by a black fluid having been deposited between the cellular septa; and one of the lobes was emphysematous. The pericardium contained about four ounces of water; the heart was small, its structure remarkably soft; the coronary arteries, and the semilunar valves of the aorta were partly ossified. The liver pale colored, and presented the appearance of what is termed cirrhosis.

The spleen was very dense in structure, and its capsule thickened by chronic inflammation. I have met with only three cases of mortification of the lungs.

- 445 The abdominal aorta and iliac arteries, the internal and fibrous coats cartilaginous and osseous. Several portions of the internal coat have been absorbed, and osseous matter has supplied its place, particularly at the origin of the cæliac artery; the aperture of the superior mesenteric is greatly enlarged, and the caliber of the inferior mesenteric artery lessened; the iliacs very large.

From a patient nearly 70 years of age; the left ventricle very large, parietes thick, and aortic valves ossified.

- 446 A case containing the inferior part of the abdominal aorta, the iliacs, and main arteries of the thigh and

leg, ossified ; some of them completely obliterated. A man 77 years of age, who had enjoyed excellent health during the greatest part of his life ; about three years previous to death, suffered several attacks of erysipelas in the right leg and foot. In April, 1814, the toes became extremely painful, and disturbed his rest in the night ; at last they began to show signs of want of vitality, and the integuments of the foot and leg became cold and discolored ; no pulsation could be felt in the anterior or posterior tibial arteries, and sphacelation supervened. The mortification proceeded very slowly to the plantar fascia, and destroyed the integuments of the sole of the foot ; the discharge of pus was extremely offensive. Irritative fever came on, which affected the brain, and terminated the life of the patient.

Inspectio. There were about three pints of water in the right side of the chest ; the pleuræ slightly inflamed ; the lungs healthy ; the bronchial tubes were loaded with dark colored mucus.

There was a considerable quantity of fluid in the pericardium, the muscular structure of the heart was very soft. Osseous matter had been deposited on the chordæ tendineæ of the mitral valve ; also on the internal surface of the ventricle near the base of one of the semilunar valves of the aorta ; but the structure of the valves was only slightly altered by small osseous deposits. The coronary arteries were greatly diminished in their caliber by bony matter, and some of the branches were obliterated. The patient never had any symptoms of angina pectoris.

The internal coat of the thoracic and abdominal aorta was ossified in irregular dense plates, and the intercostal arteries were ossified.

The iliacæ communes were partly bony, and cartilaginous, and firm portions of coagulated blood were found in them ; similar to that seen in aneurismal sacs. A portion of bone extended from the iliaca externa, into the iliaca interna, and the latter was completely obliterated by solid bone for nearly an inch ; which is shown in the preparation. There was not much disease in the arteria femoralis, till about an inch below where it gives off the profunda, but from this part to the ham it was a complete bony tube ;

the popliteal artery was obliterated by bone, and coagulated blood, and the anterior and posterior tibial arteries were obliterated.

447 Inferior part of the abdominal aorta, with the iliac arteries, converted into bone and cartilage; the iliacs greatly dilated.

448 Aorta and iliac arteries, the inner and middle coats converted into cartilage, and bone; and a portion of the internal coat, near the origin of the iliac arteries, has been absorbed.

449 Abdominal aorta and the iliac arteries converted into bone; the caliber of the arteries very large (aneurismal), those belonging to the inferior extremities were obliterated, partly by coagulated blood, and by ossific matter deposited on the internal coat; which occasioned gangrena sicca, and the death of the patient.

From a man 80 years of age.

450 Aorta and iliac arteries converted into bony tubes. From an old subject.

451 Fungoid tumors on the external coat of the abdominal aorta, and the vena cava.

The internal coat of the artery and the vein, are affected with the disease. From a patient who had fungus hæmatodes in the liver.

452 Iliac artery and vein; a fungoid tumor in the latter of considerable size, which adhered very firmly to the internal surface; the artery healthy. The iliac absorbent glands were also in a fungoid state. The patient was a woman 49 years of age; the uterus was also affected with fungus hæmatodes.

453 Femoral arteries ossified and completely obliterated by coagulated blood.

454 Femoral artery ossified, external coat highly inflamed; the profunda at its origin, and to some distance beyond, obliterated by fibrin and coagulable lymph. Several other large arteries in the same subject had undergone a similar change. The patient, a robust man, 50 years of age, died in a fit of sanguineous apoplexy.

455 Femoral arteries converted into bone.

456 The external iliac artery and vein, also the femoral artery and vein; from a man 70 years of age. He had enjoyed good health for many years, although he was troubled with a large foul ulcer, with thickened

edges on the middle of the leg near the tibia ; the veins were varicose. On the 1st of September, 1827, the wound became very painful, the pain daily increased, and there was an ichorous discharge ; the surface of the sore assumed a dark hue, and the temperature of the foot and leg was considerably diminished ; in the course of a week they showed all the signs of *gangrena sicca*.

The poor fellow suffered agonising pain ; his health became disordered ; the integuments of the foot and leg began to slough, and the discharge of pus was extremely offensive. He earnestly requested to have the leg amputated, although he was informed by the gentleman who attended him, that an operation would not save his life. At this time I was requested to see the patient ; I strongly advised him not to think of having the leg removed, as there did not appear the least chance of its proving successful at his period of life. He still persisted in wishing to have an operation performed, whatever might be the consequence. To oblige him (although it was contrary to my wish) I removed the leg, above the knee-joint ; which he bore with surprising fortitude, and it was not necessary to tie a single artery. The stump healed in the course of ten days, which was more than was expected, considering the morbid state of the arteries, and his health improved.

About seven weeks after the operation he was suddenly seized with violent palpitation of the heart, and dyspnœa, something similar to angina pectoris, and he lived only twenty four hours.

Examination of the amputated limb.

The integuments were hard and dry ; the muscles dark colored, and extremely putrid ; the periosteum dense ; it was separated from the principal part of the tibia by putrid pus. The tibia and fibula after maceration showed the effects excited by the ulcer on the leg : a considerable portion of the tibia having been absorbed. The fibula was greatly enlarged, and in consequence of periostitis, osseous matter had been deposited irregularly on the surface of the bone, and the interosseous ligament in some parts was converted into osseous matter.

Inspectio cadaveris. There was upwards of a pint of

water in each side of the chest ; there were likewise adhesions of the pleuræ of old standing.

The lungs were emphysematous, the bronchial tubes surcharged with a dark colored secretion, and in some portions of the lobes the air cells were enormously enlarged, as noticed in chronic asthma. The pericardium contained four ounces of water ; the heart was healthy in structure ; the valves of the aorta shortened and thickened by cartilaginous deposits ; the coronary arteries were diminished in caliber by osseous matter. The peritoneal surface of the liver was covered with organised lymph ; its structure was very firm ; the gall-bladder contained healthy bile. The spleen did not possess the least sign of its original structure, being converted into a dense cartilaginous mass. A portion of the tendinous surface of the diaphragm was formed into solid bone. The blood-vessels belonging to the thigh presented the following morbid appearances, from the surface of the stump as far as the iliac. The main arteries of the thigh, and to where the external iliac is given off, were obliterated by lymph, and coagulated blood. What is still more singular in this case, is, the veins belonging to the thigh, and as high as the external iliac, where it assists in forming the vena cava inferior, were shrivelled and obliterated.

457 Stump of a thigh, with the ossified arteries, &c., from a patient affected with dry gangrene of the foot. His case is described, with the preparation of the foot.

458 An aneurismal state of the whole of the aorta and its branches. The vessels of the brain were gorged with blood, and blood was effused between the arachnoid membrane and pia mater, but there was none in the substance, or ventricles ; the arteries were inflamed. The lungs were surcharged with blood, but there were no signs of organic disease, either in them or in the bronchial tubes.

There were about four ounces of serous fluid in the left side of the chest.

The pericardium contained about two ounces of water ; the heart was very large, the parietes of the left ventricle remarkably thick, and the cavity capacious ;

the carneæ columnæ were very large, and the mitral valve healthy.

The whole of the aorta was in an aneurismal state, more especially at its origin and arch ; the vessels given off by the latter were extremely large; and the arteria innominata aneurismal.

All the coats of the aorta were thickened by organised coagulated lymph and cartilaginous and osseous deposits, more especially the internal coat, and several portions of it had been absorbed. The aortic valves were not diminished in size, but at their base they were slightly coated with lymph, and at the edge of one of the valves there was a small process of lymph organised. Near the base of the aorta close to the middle valve, there was an aneurism, the opening large, the sac small; it would most probably have burst into the pericardium. The coronary arteries healthy. All these morbid changes are shown in the preparation. There were no signs of lesion in any of the abdominal viscera, but they were all surcharged with blood.

The man was only 38 years of age, of a full habit of body, and had been much addicted to dram drinking; he died suddenly in a public-house.

459 The ascending portion of the aorta. This preparation shows two different states of aneurism, one by the laceration of the internal coat, the other by dilatation of all the coats.

All the coats of the aorta inflamed; the internal greatly thickened by organised lymph, cartilage, and bone; the aortic valves slightly thickened. About half an inch from the base of the middle valve, there is a triangular opening in the aorta, which only admitted the round point of a small probe, this is shown by a black bristle in the preparation. This aperture leads to a very small aneurism, which burst into the pericardium, and destroyed the life of the patient. The internal surface of the sac was covered with coagulated lymph. The other aneurism is situated on the ascending portion of the aorta, commencing a little above the aperture of the small one, and is formed by a dilatation of all the coats, The history of the case is not known; the patient was a bass singer.

460 The arch and a portion of the descending aorta.

The internal coat immensely thickened by dense cartilage; there is an aneurism of the ascending portion of the aorta, with dilatation of all its coats; a small rupture took place, and caused death.

The aperture is shown by a black bristle. The aortic valves were only slightly thickened by lymph.

The left ventricle very large, the parietes thick, all the other parts of the heart normal. The patient a man 40 years of age.

- 461 Arch of the aorta, with a portion of the trachea, bronchi, and bronchial glands.

The internal coat of the aorta is slightly thickened by lymph; and at the anterior part of the aorta, and nearly opposite the origin of the left subclavian artery, there is an aneurism; its aperture large, but the sac very small. What is most remarkable in this preparation is, that by adhesive inflammation of the cellular tissue belonging to the bronchial glands, and the external coat of the inferior part of the aorta, a firm bond of union has been effected, and covered the sac of the aneurism; which no doubt prevented the increase of the tumor. May not this be considered an effort of nature to effect a spontaneous cure? The patient, a woman 23 years of age, died from the effects of phthisis pulmonalis. The lungs were filled with miliary tubercles, and vomicae. I do not recollect to have ever seen an aneurism in the inferior part of the arch of the aorta before.

- 462 An aneurism in the arch and the whole course of the descending aorta; it is of an immense size, and burst into the right side of the thorax. The aneurism was formed by a regular dilatation of all the coats; they are greatly thickened, particularly the internal one, by cartilaginous deposits, and organised lymph; the aortic valves healthy; the arteria innominata is very large. The sac of the aneurism contained a lamellated coagulum; and a considerable portion of the internal surface is thickly covered with lymph, which had become organised, and adhered very firmly.

The pleura pulmonalis of one of the lobes of the lungs on the right side adheres firmly to the external surface of the aneurismal sac; which is shown in the preparation.

The right side of the chest nearly filled with coagulated blood; the lungs healthy. The pericardium contained about four ounces of serum.

The heart was large, structure healthy; the left ventricle very thick, cavity capacious.

The abdominal viscera healthy.

The patient, a plethoric man, 40 years of age; he had been distressed for nearly two years, with all the symptoms denoting an aneurism; he expired suddenly.

463 The ascending aorta, its arch, and descending portion, affected with aneurism. The patient, a man 26 years of age, very plethoric, was a maniac in Old Bethlem Hospital.

He had been long troubled with a cough and great difficulty in breathing; he was suddenly seized with a severe attack of hæmoptysis, and died suddenly. The pericranium adhered very firmly (which I have generally noticed on inspecting the brain of an insane person), there was a considerable effusion of milky fluid between the arachnoid and pia mater; the structure of the cerebrum was very firm; and there were nearly two ounces of water in the lateral ventricles. The arteries and every other part of the brain appeared healthy.

The air cells of the right lung were greatly dilated, as in asthma; the structure healthy; but at the superior portion of one of the lungs, there was a calcareous concretion, about the size of a pea, beneath the pleura.

The lungs on the left side were injected with effused blood, and were rendered solid, as in apoplexy. On carefully dissecting the lungs, trachea, and aorta, the following morbid appearances were noticed.

The heart was very large; hypertrophy of the left ventricle; cavity large; the valves normal. The internal coat of the aorta greatly thickened by organised lymph, and cartilaginous matter; the coronary arteries large. The ascending portion of the aorta and its arch greatly dilated, also the arteria innominata, and its coats thickened.

At the arch of the aorta, near the left carotid artery, there is an aneurism about the size of a marble, the sac filled with fibrine which adhered

firmly ; and there is a similar aneurism at the inferior part of the arch ; the aperture of the sac of a triangular figure, and very small. In the descending portion there is another aneurism, about the figure of a walnut ; the aperture of the sac is not large, the aneurism filled with a very dense coagulum, as if nature had been attempting to effect a spontaneous cure, but the external surface of the sac, by adhesive inflammation, was agglutinated firmly to the outer surface of the left bronchus ; ulcerative absorption having been excited, several portions of the annuli were destroyed, which allowed the blood to escape into the trachea.

All the abdominal viscera healthy.

This is a very valuable preparation.

- 464 An aneurism in the arch of the aorta, of considerable magnitude ; it had ascended as high as the inferior portion of thyroid gland ; firm adhesion had taken place between the posterior part of the sac of the aneurism, and the anterior surface of the trachea ; and an ulcerated opening of communication had been produced between the aneurism, and the trachea ; the patient died suddenly from hæmorrhage.

The parietes of the aneurism are not thicker than those of a healthy aorta ; the sac contains a very dense lamellated coagulum, mixed with fibrine, which nearly filled it, and in some portions firm adhesions had been effected between its internal surface and the fibrine, which is seen in the preparation. The internal coat of the aorta is greatly inflamed, also the arteries given off at its arch, and they are implicated in the sac ; the caliber of the arteria innominata, a little above its origin, is lessened, and the left carotid nearly obliterated. This is a splendid specimen to show how nearly a spontaneous cure had been produced.

The history of the case is not known.

The patient must have suffered great difficulty in breathing, &c.

In Mr. HODGSON's Work on Aneurisms, there is a plate of an aneurism in some respects similar to the preparation last described.

- 465 An aneurism in the ascending portion of the arch of the aorta. The patient, a robust man, 46 years of age,

had been troubled with a violent palpitation of the heart, accompanied with unusual pulsation in the carotid arteries, for nearly a year and a half. About six months previous to his death, those symptoms became more distressing, he had great difficulty of breathing, and occasionally the paroxysms of dyspnœa were so alarming as to threaten immediate suffocation: the lips and face were of a purple color, accompanied with syncope; he was also annoyed with a violent cough, which produced epistaxis. There was a considerable quantity of water in both sides of the chest: the lungs were gorged with blood, and partly hepatised.

The pericardium contained about four ounces of water.

The heart was of an immense size; both ventricles very muscular, and their parietes thick; cavities large.

The mitral valve healthy, but the *carneæ columnæ* and *chordæ tendineæ* were very large. The aorta, from its origin to the arch, immensely dilated, and all its coats greatly thickened, especially the internal one, which was occasioned by deposits of lymph, and semi-cartilaginous products, between it and the fibrous coat.

At the commencement of the aorta, and close to the middle aortic valve, there is an aneurism; the aperture nearly the circumference of a Spanish dollar; which in time would have burst into the right auricle of the heart. There is also another aneurism, at the superior and posterior portion of the aorta, near the origin of the large vessels springing from it.

The opening of this aneurism is nearly of the same size as the one at the base of the aorta; the sac small, and its posterior surface united firmly to the anterior part of the trachea about half an inch from the bronchi; ulceration had commenced at this part, which had destroyed a portion of the sac; and had the patient lived a little longer, the aneurism would have burst into the trachea.

The vessels of the arch of the aorta were of immense size, particularly the *innominata*; the coronary arteries were large, and their coats dense. The liver was very large, and granulated; all the abdominal viscera were gorged with blood.

The aneurisms in this case were produced by a regular dilatation of all the coats.

Professor SCARPA imagined that all aneurisms were occasioned by laceration of the internal coat; this statement I find to be incorrect, from having examined a great number of aneurisms; yet in some instances I have found the internal coat ruptured.

- 466 An aneurism at the ascending part of the aorta and its arch; the thoracic and abdominal portions and iliac arteries are preserved in the preparation.

The patient, a man 70 years of age; all the symptoms denoting aneurism were evident; the carotid arteries pulsated violently; but in consequence of the radial and ulnar arteries being ossified, the pulse could not be felt.

There was a considerable quantity of water in both sides of the chest; the lungs were healthy, but gorged with blood. The pericardium contained six ounces of serum: the heart was large, the left ventricle thickened, cavity capacious, and the aperture and mitral valve thickened. The aortic valves were ossified, and shortened; the ascending part of the aorta and arch were greatly dilated, the coats very thick, the internal one converted into bone of great density, and cartilage, particularly near its origin. These appearances are well shown in the preparation. The arteries at the arch are remarkably large, especially the innominata; the right carotid, and the subclavian are also enlarged: this was produced by an aneurismal state of the arteria innominata. The internal coat of the thoracic, abdominal, and iliacs, presents the same morbid changes as in the other portion of the aorta. There was a considerable quantity of water in the abdomen. The liver was very dense in structure, and nodulated; the gall-bladder distended with viscid green-colored secretion; the spleen very large and dense.

- 467 An immense aneurism at the arch of the aorta, which produced partial absorption of a portion of the sternum and some of the ribs. The patient was a woman 37 years of age; the disease had proceeded gradually for nearly sixteen months. About a fortnight previous to her death, the integuments covering the enlargement became inflamed, sphacelation ensued, and the aneurism burst; the hæmorrhage was tremendous.

The sac of the aneurism had caused absorption of a considerable portion of the sternum, and the remaining part was carious, also some of the ribs. There was a considerable quantity of coagulated blood and fibrine in the sac of the aneurism. The aorta, from its origin as far as the iliac arteries was greatly dilated, the internal coat converted into solid bone and cartilage, and in some parts ulceration had taken place. The heart was large; the parietes of the left ventricle very thick, the cavity large; the valves normal, all the abdominal viscera natural, also those in the thorax, but the blood-vessels were empty.

What is most remarkable in this case is, that the internal coat of the aorta should have become ossified to such a degree, in so young a person.

468 A section of part of a coagulum and fibrine, taken from the sac of the aneurism last described, showing the laminated arrangement.

469 An aneurism of great magnitude, at the origin and arch of the aorta; also a small aneurism at the descending portion. A man 55 years of age; the symptoms of aneurism had existed for nearly two years; he was greatly emaciated, and died very suddenly.

A part of the right side of the sternum; the cartilages of the 2nd, 3rd, and 4th ribs were absorbed; had the patient survived a little longer, the integuments of the chest on the right side would have sloughed, and the aneurism burst on the right side of the thorax. This side of the chest was nearly filled with coagulated blood, and the lungs were in consequence compressed, but healthy in structure, as were those on the left side. The liver large, and in some parts schirrous; the gall-bladder did not contain much bile, the spleen large, and very firm in texture.

There were about four ounces of water in the pericardium; the heart was large, the parietes of the left ventricle very thick, the cavity large; the mitral valve healthy; the coronary arteries large.

The sigmoid valves are slightly thickened at their base, and near the edge of two of them, there is a small aperture, which is seen in the preparation.

The aneurismal enlargement had been occasioned by a gradual dilatation of all the coats, and not by lace-

ration of the internal one ; the left subclavian artery at its origin and a little above, is dilated, and there is another aneurism about the size of a walnut, at the descending aorta, nearly an inch from the origin of the left subclavian. This aneurism is also formed by a distention of all the tunics ; the sac did not contain coagulated blood, or lymph.

- 470 An aneurism at the descending portion of the aorta, which burst into the œsophagus, and the right bronchus. A man, 60 years of age, was admitted into Cripplegate Workhouse in 1825 ; he had been at a Dispensary for a considerable time. He complained of having suffered greatly from the effects of a cough and pain in the chest, accompanied with great difficulty in breathing ; his face looked sallow, lips of a purple color, and he appeared greatly dejected ; pulse 120 in a minute, small, but not irregular ; he also said he had experienced great trouble in swallowing food or medicine for some time.

The fauces were carefully examined, they appeared in a healthy state ; from the color of his lips and skin, it was imagined that the liver and heart were diseased. He refused taking any medicine, and scarcely took any nourishment ; about a week from the time of his admission, he was suddenly seized with hæmatemesis, which was so profuse as to threaten destruction of life. This hæmorrhage gradually subsided, but he voided blood with his fæces, and about the third day from this attack, the vomiting of blood recurred, accompanied with hæmoptysis, which caused immediate suffocation.

In both sides of the chest there were old standing adhesions between the pleuræ ; the lungs of the right side were partly hepatised, and one of the lobes in the left cavity was injected with blood. The ventricles and valves of the heart were natural ; but the auricles were extremely capacious, and very muscular ; the fossa ovalis greatly expanded. The internal coat of the aorta is greatly condensed by cartilaginous and osseous matter ; the caliber of the arteries at its arch is large, especially the innominata.

At the descending part of the aorta, near the origin of the left subclavian artery, and the under surface of its arch, there is an aneurism of moderate size ; the

sac is partly filled with coagulated lymph and blood; firm adhesions had been formed between it, part of the left bronchus, and the œsophagus, and in consequence of ulcerative absorption of the parts, the aneurism burst into those tubes.

The aperture of the aneurism is large for the size of the sac. The liver was much increased in magnitude; structure dense, and granulated; the gall-bladder was filled with viscid fluid; the spleen large and firm. There was a considerable quantity of blood in the intestines. What is very singular in this case is, that there were no diagnostic symptoms to denote the existence of an aneurism. Perhaps the situation of the aneurism, the smallness of its sac, and the latter having been partly filled with coagulated blood and lymph, might account for the absence of that peculiar pulsation which is generally noticed in aneurisms.

In aneurisms situated in the abdominal aorta, it is in some cases very difficult to decide correctly their existence, either by the aid of the ear, or the stethoscope. At an early stage of the disease, before the sac is either filled with coagulated blood, or fibrine, the real nature of the disease can be generally detected; but in the latter state of the artery, there is very great uncertainty. Sometimes a pulsation is felt in the abdominal aorta, exactly similar to that produced by an aneurism; which is often caused by a disordered state of the digestive organs, or some organic lesion of the liver; and when the health of the patient is re-established, the sympathetic pulsation ceases.

This is a very valuable preparation.

- 471 An aneurism at the arch of the aorta. The valves of the aorta healthy; the internal coat thickened by bone and cartilage; the ascending portion dilated; there is a large aneurism at its arch, and the arteria innominata is aneurismal; the rest of the arteries are greatly enlarged in caliber, and their internal coat is similar to that of the aorta. The sac of the aneurism had adhered firmly to the superior and central part of the sternum; it had sloughed at this part, and a portion of the sternum and ribs had been removed by ulcerative absorption; had the

patient lived a few days longer, the aneurism would have burst externally. The patient was a man 50 years of age; the disease had been making progress nearly eight months. See the cast of the external part.

- 472 An aneurism of tremendous size at the ascending part of the aorta and its arch.

The heart was very large, hypertrophy of the left ventricle, cavity capacious. Valves normal.

The sigmoid valves of the aorta extremely large, their base slightly thickened by lymph. The aorta, from its origin and arch formed an immense aneurism; all its coats were rendered very dense, particularly the internal one, by organised lymph and cartilage; and all the vessels given off by this artery are aneurismal.

The sac adhered firmly to the cellular tissue of the sternum, it had, at this part, sloughed, and nearly the whole of the sternum, and portions of the ribs had been absorbed. The aneurism protruded externally; the subcellular tissue and integuments belonging to the anterior surface of the thorax, sphacelated; and in a short time the aneurism would have burst through the skin.

The sac was filled with coagulated blood and fibrine; some portions of the latter are preserved in the preparation. The internal surface of the sac is thickly coated with organised lymph. This is a magnificent preparation. The patient,—a man 50 years of age, the disease had proceeded gradually for nearly three years.

- 473 An aneurism of the descending and inferior part of the aorta, of considerable magnitude. The valves normal; the internal coat of the aorta immensely thickened by organised lymph, and irregular productions of cartilage. The aperture of the aneurism is about the circumference of half a crown; the sac nearly filled with coagulated blood and fibrine; the internal surface very thick.

This is an aneurism by dilatation of all the coats.

The patient was a very athletic man, 40 years of age.

- 474 An aneurism in the thoracic aorta, the sac of which had formed adhesion to the pleura of one of the lobes of the left lung; the sac gave way, and filled this side of the chest with blood.

- 475 Four dorsal vertebræ, the anterior and lateral surfaces

of three of the bodies absorbed, occasioned by the cyst of a large aneurism.

- 476 An aneurism of immense magnitude, at the descending portion of the aorta, where it passes through the crura of the diaphragm. From a man, 49 years of age, who had lived freely, and was of a very plethoric habit of body: he died suddenly.

There was a considerable quantity of water in the pericardium; the heart very large, structure extremely soft; parietes of the left ventricle extremely thin, cavity capacious (the passive aneurism of Corvisart.)

The right auricle capacious, and the foramen ovale widely open; which is shown, by a piece of colored glass, in the preparation.

The aorta greatly dilated; the internal coat thickened with coagulated lymph, cartilage and osseous deposits; and the vasa vasorum were very conspicuous in the cellular, or external coat. The coronary arteries large.

The right cavity of the thorax was nearly filled with coagulated blood. The sac of the aneurism was extremely large, and nearly filled with coagulated blood and fibrine, which in some parts adhered firmly; the anterior portions of three of the dorsal vertebræ, and one of the lumbar had been partly absorbed, leaving the articular cartilages entire.

The liver was granulated; the spleen nearly double the natural size. He had suffered for a considerable length of time from palpitation of the heart, and dyspnœa; the pulse generally full, and hard; for some months previous to his death he had symptoms of icterus.

- 477 An aneurism of the descending portion of the aorta, the sac ulcerated. A man, 30 years of age, of a very plethoric temperament, had been troubled with palpitation of the heart for nearly eight months, accompanied frequently with violent pain in the head, and dyspepsia. He had consulted several physicians; some imagined he had organic disease of the heart, others thought the symptoms were occasioned by a disordered state of the digestive organs, and various modes of treatment had been employed without benefit.

For nearly three months previous to his death, he was

annoyed with cough and difficulty of breathing; he became extremely irritable, and expired very suddenly.

The brain was natural; the blood-vessels empty. There was a considerable quantity of coagulated arterial blood, in both cavities of the thorax. The heart and lungs were perfectly healthy, but without blood. On carefully examining the course of the aorta, an aneurism was detected in the descending portion, about two inches below the point at which the left subclavian artery is given off, and the sac had ulcerated.

This lesion was found upon dissection, to have been produced by a large spiculum of bone, which had its origin from the anterior surface of the body of the third dorsal vertebra, and had occasioned ulceration of portions of the pleuræ which allowed the blood to flow from the aneurism into both cavities of the thorax.

All the abdominal viscera were healthy, but appeared blanched from the loss of blood.

The internal coat of the aorta is thickened by coagulated lymph; the aperture of the aneurism large, but the sac small, and its ulcerated condition is well exhibited in the preparation.

This specimen is interesting in two respects, firstly, as regards the situation of the aneurism; and secondly, as displaying the real cause of its formation. The following question naturally suggests itself to the mind of the pathologist on viewing it, viz:

Did the morbid state of the aorta cause the spiculum of bone to be formed, or did the presence of the bone give rise to the aneurism?

- 478 An aneurism of great magnitude in the abdominal aorta. The patient, a man 58 years of age; the disease had existed two years; during its incipient stage symptoms denoting aneurism were present, but these became in time less distinct, and at last ceased altogether, which induced the medical attendant to suspect the disease to be a tumor of some kind, and not an aneurism. The cyst of this tremendous aneurism, with the fibrine and coagulum, weighed $5\frac{1}{2}$ pounds avoirdupoise. The whole of the internal coat of the aorta was of a semicartilaginous density;

the aneurism had commenced at the posterior part of the abdominal aorta, nearly opposite the superior mesenteric artery, the sac of the aneurism is extremely dense, the superior mesenteric artery obliterated with lymph, and the left renal artery nearly closed. The vena cava is also shown in the preparation.

To lessen the size of this specimen, the contents of the aneurism were removed, also a considerable portion of the cyst.

- 479 An aneurism at the inferior part of the abdominal aorta, between the superior mesenteric artery, and the division into the iliacs.

The internal coat of the aorta partly bony and cartilaginous ; in some parts ulcerated.

The history of this case is not known.

- 480 An aneurism of the abdominal aorta, of great magnitude ; the sac contained nearly two pounds of coagulated blood ; it had not burst.

The anterior surfaces of four of the bodies of the vertebræ partly absorbed ; the intervertebral substances only slightly affected.

A man, a coal-heaver, 44 years of age, very robust ; there were no signs of disease in any other part of his body.

- 481 An aneurism of the abdominal aorta, a little above the origin of the celiac axis, which burst into the abdomen. The aperture of the aneurism is about the circumference of a sixpence. The aneurism adhered to the inferior surface of the diaphragm ; the coats of the sac were sphacelated ; this is what has been denominated a diffused aneurism. The patient, a man, about 40 years of age.

The heart healthy ; the internal coat of the aorta only partly thickened. In this aneurism, the internal coat had at its commencement, lacerated.

- 482 The inferior portion of the abdominal aorta, with the iliacs, and a part of the femoral artery. On one side the internal iliac artery is obliterated by coagulated lymph, as are some of the branches of the femoral artery ; the main trunk is immensely dilated, and all the coats greatly thickened ; there are two large aneurisms in close succession to each other, which are formed by a regular dilatation of all the coats.

I do not think that this species of aneurism is likely to terminate unfavorably.

- 483 An aneurism in the splenic artery, which had undergone spontaneous cure. From a woman, 64 years of age; she died suddenly in a fit of apoplexy; most of the main arteries were ossified.

- 484 A portion of the brachial artery and vein. The artery obliterated by coagulated blood, the vein thickly coated with coagulated blood, consequent on phlebotomy. Phlebitis extended from the vein to the right auricle and ventricle of the heart; which caused irritative fever, and produced the death of the patient.

I have seen two similar cases.

It would be a difficult point to decide, whether phlebitis, in those cases, was produced by a blunt, or unclean lancet, or caused by idiosyncrasy.

- 485 A small aneurism in the inferior portion of the radial artery; it occupies only one half of the caliber of the vessel; the aperture of the aneurism is large; the sac about the size of a large pea, and completely filled with densely coagulated blood.

The last preparation shows beautifully a small aneurism cured spontaneously.

An engraving of this preparation will be found in Mr. HODGSON'S Work on Aneurisms.

- 486 A portion of the femoral artery, showing an incipient aneurism by dilatation of all the coats, at the origin of the profunda.

The internal coat opaque.

- 487 A popliteal aneurism of considerable size. The sac is nearly filled with fibrine and coagulated blood: the femoral artery was tied; the man died a few days after the operation, from the giving way of the artery where the ligature was applied; the coats of the vessel being diseased.

- 488 A small aneurism of the anterior artery of the cerebrum, which had undergone spontaneous cure by a firm coagulum of blood. The patient, a man 57 years of age, was an incurable maniac in old Bethlem Hospital. The arachnoid membrane and pia mater were greatly thickened; and there was a considerable effusion of milky fluid between them. The substance of the brain was very firm, and there were nearly four

ounces of water in the lateral ventricles ; the membranes at the base of the brain were dense, and some of the arteries ossified.

In Mr. HODGSON's Work on Aneurisms, an engraving of this aneurism is beautifully represented, and a description is given.

489 Arteries belonging to the base of the brain. The vertebral and basilar aneurismal ; the coats of the anterior cerebral ossified.

From an old man who died of apoplexy.

490 Plexus choroides, ossified ; from an old subject. The arteries of the brain were also converted into bone, and their caliber greatly lessened.

491 A portion of carotid artery, healthy in structure ; a piece of dentist's twist was applied tightly around it, and afterwards removed ; this shows the neat and clean manner in which the internal and fibrous coats have been divided, leaving the external or cellular, entire.

492 External carotid artery obliterated.

493 Veins of the uterus, with phlebolites within them.

494 Two phlebolites taken from an uterine vein.

SECTION VI.

NERVOUS SYSTEM.

The Brain and Spinal Cord—Normal Anatomy.

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- 495 A portion of the inferior part of the medulla spinalis ;
the cauda equina unravelled.
496 Cauda equina unravelled.
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Comparative Anatomy.

- 497 Anterior lobes of the brain of a monkey ; the commis-
sura mollis shown.
498 The brain, and a portion of the medulla spinalis of a
cat. There are no middle lobes in this animal ; the
convolutions of the two hemispheres are large. The
cerebellum is divided into four lobes, two lateral, and
two central ; which correspond with the quadran-
gular cavities formed by the occipital bone, and bony
tentorium. The corpora quadrigemina distinguish
the brain of herbivorous from that of the carnivorous
quadrupeds ; the nates of the former exceeding
considerably the size of the testes.
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The Brain and Spinal Cord—Morbid Anatomy.

- 499 Two portions of brain, with some of the arteries.
From a man who died of sanguineous apoplexy. The
membranes of the brain were thickened ; blood was
found effused into the substance of both hemispheres.
After removing the coagula, several small arteries which
had been ruptured were seen ; and at their extremi-

ties, there were firm clots of blood, which proved that the apoplexy was produced by laceration of a number of small vessels. Most of the arteries belonging to the brain were ossified, some obliterated.

The patient had been afflicted with symptoms of cerebral disease for a considerable length of time prior to the apoplectic attack.

Sudden apoplexy was produced by the bursting of several large arteries.

500 A portion of brain, with the plexus choroides.

The arachnoid membrane and pia mater are greatly thickened; there was a considerable quantity of pus between them, and an abscess on the external surface of the left hemisphere of the cerebrum, which extended deeper than the convolutions, and a considerable portion of the brain had absorbed.

There are serous cysts in the plexus choroides.

The substance of the brain was highly inflamed.

The history of this case is not known.

501 A portion of brain, and its tunics. From a man 30 years of age, a confirmed drunkard; he was seized with delirium tremens, which was succeeded with symptoms of typhus fever; he became furiously delirious, and died about a week from the commencement of the attack.

Inspectio. There was a great effusion of blood between the arachnoid, and pia mater, partly in a fluid state and partly coagulated; these tunics were highly inflamed, as was the substance of the brain; and there was likewise a considerable quantity of fluid in the ventricles. All the vessels of the brain were greatly distended. These appearances are well exhibited in the preparation, the parts having been preserved in alcohol.

The liver was greatly enlarged, structure granulated, gall-bladder greatly distended with black viscid secretion; spleen large, and solid; kidneys granulated.

This is a very valuable specimen.

502 Two portions of brain affected with fungus hæmatodes. From a child; the longitudinal sinus was filled with medullary matter, and the inguinal glands were affected with the same disease.

503 A portion of brain, with two fungoid tumors in the

- crura cerebri. The brain became affected, and the patient died.
- 504 A portion of cerebellum, with the arachnoid membrane, and pia mater. The arachnoid membrane and pia mater were greatly inflamed, also the substance of the brain.
- From a very plethoric man, who was attacked with ear-ache on the left side, which became very distressing; the symptoms increased in violence for three days, when a profuse discharge of pus escaped from the ear. The patient imagined the complaint to be merely the effect of a severe cold; he did not think it necessary to ask advice, and only employed fomentations, and poultices. On the fourth day from the attack, symptoms of apoplexy appeared, and I was requested to visit him. He was quite insensible; breathing stertorous; pulse full and hard; and the vessels of the conjunctivæ surcharged. A considerable quantity of blood was taken from a vein in the arm, a blister applied to the nape of the neck, an active purgative given, and cold water applied to the head, he lived only twelve hours.
- Inspectio cadaveris. All the thoracic and abdominal viscera were perfectly healthy; but the large veins were greatly distended, and the internal coat of the main arteries was inflamed.
- On cutting open the dura mater, on the left side, a considerable quantity of pus escaped from between the arachnoid membranes; and they, as well as the pia mater, were highly inflamed, and thickened.
- The substance of the brain was very firm, and inflamed; and there was pus in the ventricles.
- On examining the internal and external structure of the ear, pus was found in the semicircular canals, cochlea, and vestibulum; and the lining of the meatus auditorius externus was in a sphacelated state.
- This patient might have been saved, if, at the commencement of the ear-ache, depleting means had been employed.
- 505 A schirrous tumor, found in the cerebellum of an adult; there was a considerable quantity of water in the lateral ventricles.

* * * *The following preparations, from 507 to 527, are in the Museum of the Royal College of Surgeons, London.*

- 506 Brain affected with apoplexy.
 - 507 Brain showing an old apoplectic cell.
 - 508 Apoplexy of the brain.
 - 509 Brain with apoplectic cells, &c.
 - 510 A large apoplectic cell.
 - 511 Brain and its membranes inflamed.
 - 512 A portion of brain minutely injected with size and vermillion. From a man who died in the inflammatory stage of typhus fever.
 - 513 A congenital cerebral hernia.
 - 514 Brain of a child born with hydrocephalus internus, and spina bifida.
 - 515 An abscess in the brain.
 - 516 An abscess in the brain.
 - 517 An abscess in the brain.
 - 518 An abscess in the brain, membranes thickened.
 - 519 Carcinoma of the brain.
 - 520 Schirrous tubercles in the brain.
 - 521 Schirrous tumors in the tuber annulare.
 - 522 Schirrous tubercles in the brain.
 - 523 Schirrous tubercles in the brain.
 - 524 Carcinomatous tumors in the cerebellum.
 - 525 Schirrous tubercles in the cerebellum, the infundibula greatly dilated. From an adult, who had chronic hydrocephalus, and died suddenly of apoplexy.
 - 526 A portion of brain, the infundibulum greatly dilated by hydrocephalus internus, which affected the optic nerves, and produced amaurosis.
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Membranes of the Brain and Spinal Cord—Normal Anatomy.

- 527 Dura mater, showing the glandulæ Pacchionæ, &c.
- 528 Theca vertebralis, with some of the nerves; the arteries injected with size and vermillion.
- 529 Dura mater, with coagulated blood adhering to its surface. From a boy 8 years of age, who was kicked by a horse, and the right temporal and parietal bones were fractured: he lived 10 hours after the accident.

Post mortem examination. Fragments of the bones were driven through the dura mater into the cerebrum; and blood had been effused beneath the dura mater, and the arachnoid, on both hemispheres of the brain.

- 530 Dura mater and arachnoid membrane diseased. The external surface of the dura mater adhered so firmly to the inner surface of the cranium as to require dissection to detach it. The whole of the arachnoid membrane is greatly thickened, and in some portions converted into cartilage and bone.

There was water in the lateral ventricles; the patient had amaurosis, &c.

- 531 A portion of dura mater, showing the effects of a trephine, in a case of fractured cranium.

By the incautious employment of this instrument, the dura mater was injured; inflammation ensued, and lymph was deposited. The inflammatory action extended to the arachnoid membrane lining the dura mater, and to that portion covering the pia mater, and considerable thickening had been effected. The brain was very soft, and highly inflamed, which caused death.

- 532 A portion of dura mater, with the falx. A morbid growth of considerable extent, firm in texture, and presenting a granulated appearance, is seen on the external surface, in a line with the longitudinal sinus. The caliber of the sinus is greatly diminished near the diseased part, and its internal surface greatly thickened, also the arachnoid lining the dura mater, and the falciform process. These appearances are shown in the preparation.

The history of the case is not known.

As the disease of the dura mater does not appear of a malignant character, probably it was the result of inflammation, from some injury done to the head.

- 533 Theca vertebralis, the internal surface thickly coated with organised lymph.

From a child who died from diseased vertebræ.

- 534 Cauda equina, theca inflamed, and lymph deposited on the external surface of what is called the cellular membrane, belonging to the spinal canal. From a woman who had a diseased sacrum.

- 535 Theca vertebralis, with a portion of the cauda equina.

From a man who had a fractured os coccygis, which produced caries of the sacrum, and inflammation of the membranes belonging to the medulla spinalis, &c. Organised lymph is thickly deposited on the external surface of the dura mater.

One of the sacral nerves is shown in the preparation ; it is greatly flattened, and discolored.

- 536 Dura mater, and arachnoid membrane. The longitudinal sinus obliterated by medullary sarcoma ; the arachnoid membrane and pia mater greatly thickened. In medullary tumors, the veins are sometimes found filled with the same morbid secretion ; but I never saw, except in this instance, the longitudinal sinus obliterated by fungoid disease.

From a patient who had fungus hæmatodes in the brain, also in the inguinal glands, &c.

- 537 Dura mater and arachnoid membrane inflamed, and greatly thickened.

From a woman who had a carcinomatous tumor in the antrum Highmorianum.

- 538 A portion of dura mater and arachnoid membrane, with a tumor in the plexus choroides.

From a man 64 years of age, who had a malignant tumor in the scalp at the vertex of the head ; which caused caries in a portion of the parietal bone. The bone was absorbed, the dura mater exposed, and the pulsation of the arteries of the brain was seen. It was expected that the longitudinal sinus would be opened by ulceration, this however did not take place ; the surface of the dura mater assumed a healthy appearance ; granulations formed, and there was a considerable discharge of pus. The man continued in this state for two years, without experiencing much uneasiness, except what he called "slight pain in the head." He died of serous apoplexy.

Inspectio. The longitudinal sinus was inflamed ; the arachnoid membrane lining the dura mater, and covering the pia mater, was thickened by chronic inflammation ; the pia mater was also thickened, and there was a considerable quantity of water beneath this tunic.

The ventricles contained about six ounces of water ; and in each plexus choroides there was a tumor, of about the size of a horse-bean.

- 539 A portion of dura mater, with the arachnoid and pia mater injected with size and vermillion ; the arachnoid and pia mater are greatly thickened by chronic inflammation, and the under surface of the pia mater is granulated. From a man, an incurable maniac ; there was also water in the ventricles.
- 540 Dura mater and arachnoid membrane. The tunica arachnoides and pia mater were greatly thickened ; the substance of the brain highly inflamed. From a man who died of typhus fever.
- 541 Dura and pia mater, the latter greatly thickened by chronic inflammation ; a portion of the brain is also shown. From a man who died of serous apoplexy.
- 542 Dura mater and falx, with the arachnoid and pia mater, also a portion of the cerebrum.
The tunics are greatly thickened, and the convolutions of the brain flattened ; the falciform process of the dura mater is imperfectly developed, there being several fissures in it. There was a large collection of pus between the arachnoid membrane, and the pia mater ; the brain was inflamed, and there was pus in the ventricles.
- 543 Dura mater, with the other tunics, and a portion of the cerebrum. Blood is effused between the arachnoid membrane and the pia mater, which adheres firmly to the former, and the arachnoid covering the pia mater is thickened. A plethoric man, 67 years of age, was thrown out of a gig, and fell on the right side of his body ; he was taken up quite insensible. I saw the patient soon after the accident, he appeared laboring under symptoms of compression of the brain ; the breathing stertorous, pupils of the eye contracted ; the vessels of the conjunctivæ greatly distended ; pulse full and hard.
- On examining the head, to ascertain whether there was fracture of the skull, I detected a considerable enlargement on the right side of the head, beneath the integuments covering the temporal and parietal bones. I could not detect any signs of fracture in any part of the cranium ; the enlargement I considered was occasioned by effusion of blood beneath the integuments. The elbow on this side was bruised ; and some of the true ribs were fractured. A considerable quantity of blood was taken from a

vein in the arm, an active purgative given ; the head shaved, an evaporating lotion constantly applied, and a proper belt to the chest. To my astonishment, the day after the accident, he was able to answer questions correctly ; but he had not the least recollection of his having had an accident. He complained of excruciating pain in the chest, and the breathing was laborious ; he said “ he felt bruised all over his body.”

The pulse remaining full and hard, and the scalp being very hot, bleeding from the arm was repeated ; leeches were applied to the head, and saline aperient medicine prescribed. For nearly a week there appeared some hope of his recovery ; but he occasionally complained of a pain in the head, and at times his mind was confused.

Four days previous to his death, febrile action came on, succeeded by considerable cerebral affection ; which terminated in convulsions.

The patient lived fourteen days from the time of the accident.

Inspectio. The calvarium very thick ; there was water between the arachnoid membrane and the pia mater ; on the left side a considerable quantity of coagulated blood was found, firmly adhering to the arachnoid membrane lining the dura mater ; the blood had lost a considerable portion of its colouring matter. The brain was inflamed, and there was more water in the ventricles than natural.

Four of the true ribs were fractured at about three inches from the connecting cartilages ; no signs of union had taken place. The pleura costalis on this side was not inflamed. The thoracic viscera healthy.

The liver was firm in texture, and granulated ; the spleen large and solid. One of the kidneys was in a state of atrophy, and enclosed a large serous cyst filled with a mixture resembling chalk and water, probably the effects of gout ; the patient having been long afflicted with this disease. In this case there were none of the positive symptoms of compression, or concussion, except on the day of the accident.

544 **Dura mater**, with the falx, arachnoid, and pia mater. From a plethoric man who died of phrenitis. The internal surface of the dura mater, and falciform process are inflamed.

The arachnoid membrane and pia mater (more especially the latter) were highly inflamed, as was the whole substance of brain; and the blood vessels were greatly distended.

The internal surface of the longitudinal sinus was filled with firmly coagulated blood, and fibrine; some of the latter is shown in the preparation. The parts were preserved in alcohol, which shows the inflammatory appearances beautifully. I never before saw the pia mater in such an inflamed state.

- 545 The superior surfaces of the hemispheres of the brain, showing a thickened state of the arachnoid membrane, and of the pia mater.

From a man 70 years of age, who had been for many years afflicted with gout, and was obliged to be frequently bled, or cupped, and took large doses of colchicum. The last attack was remarkably severe; his stomach was affected, and symptoms of inflammation of the brain supervened; which could not be subdued by the most active treatment.

Inspectio. The bones of the cranium were thick, and solid as ivory. There were nearly eight ounces of dark colored fluid, like claret, between the arachnoid membrane and the pia mater.

The arachnoid membrane lining the dura mater, and that portion reflected over the pia mater, were greatly thickened by chronic inflammation; and a dense adventitious membrane was found between these tunics. These appearances are shown in the preparation. The structure of the brain was inflamed; there was not more fluid in the ventricles than natural; most of the arteries belonging to the brain were partly cartilaginous, some of them ossified. The thoracic and abdominal viscera were healthy; the kidneys were granulated, and there was a large serous cyst in one of them.

- 546 A portion of arachnoid membrane and pia mater inflamed; the blood-vessels are greatly enlarged by blood; —preserved in spirit of turpentine.

This is a beautiful preparation. From a boy 14 years of age.

The concatenated glands on both sides of the neck, were greatly enlarged, which ultimately compressed the bronchi, and occasioned great difficulty in

breathing ; the lungs became affected with scrofula, together with many other parts of his body ; also the brain, and he died.

- 547 Pia mater injected ; the under surface granulated, the effects of inflammation.
From the subject last described.

* * * *The following preparations, from 548 to 558, are in the Museum of the Royal College of Surgeons, London.*

- 548 Membranes of the brain inflamed.
549 Brain, tunics greatly thickened.
550 The internal surface of the longitudinal sinus thickened.
551 Internal surface of the sinuses of the brain inflamed.
552 Dura mater and pia mater thickened.
553 Tunica arachnoidea thickened.
554 Arachnoid membrane thickened
555 Brain, pia mater injected.
556 Pia mater greatly thickened.
557 Pia mater thickened.
558 Tumors and serous cysts in the plexus choroides.

THE NERVES—*Normal Anatomy.*

- 559 The superior part of the great sympathetic nerve ; the chorda tympani, par vagum, part of the medulla spinalis, and the axillary plexus of nerves are shown ; also the lingual, and laryngeal nerve. The semicircular canals and membrana tympani are likewise exhibited in the preparation.
From a fœtus between the 6th and 7th month.
560 Sacral nerves shown, also the anterior crural, obturator, and the ischiatic.
From a fœtus between the 6th and 7th month.

The Nerves—Morbid Anatomy.

- 561 A portion of brain, with the optic nerves, the latter are extremely small. From a girl about 8 years of age, who was born with hydrocephalus, blind, and deaf. At the time of her death the head was im-

mensely large, the fore-head very high, and the rest of the frontal bone greatly developed.*

All the common bones of the cranium were extremely thick, solid, and very vascular ; and the sutures were completely obliterated.

There was a large collection of water in the ventricles ; the brain was very soft, and there were no signs of convolutions.

- 562 Two portions of the ischiatic nerve, from a stump ; the extremities bulbous, occasioned by periosteal exostosis on one side of the femur, after amputation ; the nerve being impacted in the disease.

In the 16th Volume of the Royal Medico-Chirurgical Transactions, a paper of mine is published, containing practical observations on the healthy and morbid condition of stumps. And most of the preparations are in the Museum of the Royal College of Surgeons.

- 563 Portions of the ischiatic nerve, their extremities bulbous.

- 564 A portion of the ischiatic nerve, showing a bulbous enlargement after amputation of the thigh.

- 565 A part of the ischiatic nerve, unravelled, showing a great number of ganglionic tumors of various sizes in the fibrillæ. The nerve was extremely large, the neurilema dense ; and the cellular tissue connecting the filaments adhered so firmly as to render the separation of the different parts, by dissection, extremely tedious. The blood-vessels were very large. The nerves belonging to the integuments and muscles of the thigh, showed similar tumors to those in the ischiatic nerve ; only smaller in size. Sections of some of the enlargements proved they were of a dense fibrous structure, like those noticed in morbid stumps.

The tumor in the thigh appeared to be formed of loose coagulated blood, mixed with sero-purulent infiltration ; not unlike the tumors described by Mr. HEY ; but the morbid parts not having been preserved in a sufficient quantity of alcohol, they were in so putrid a state, that it was impossible to decide whether the disease was fungus hæmatodes, or medullary sarcoma.

* See Cast of the head and face.

The structure of the knee-joint did not appear to be affected. See the dried preparation of the parts.

Mr. LAWRENCE extirpated, at different times, some of the tumors. The first was removed from the eye-brow, in 1825. The second from the fore-arm, and the tumor adhered so firmly to the ulnar nerve, that it was found necessary to remove a portion of it; the third tumor was removed from the fleshy part of the stump; and the disease had extended as high as the tuber ischii.

Mr. LAWRENCE has described the history of this remarkable case in the 17th Volume of the Royal Medico-Chirurgical Transactions; and Mr. TRAVERS has quoted it in his Work on the Pathology of the Nervous System. A description of the morbid appearances of this ischiatic nerve is also given by Mr. SWAN, on the Diseases of the Nerves.

In a pathological point of view, it would be difficult to decide, whether the morbid state of the nerves caused the growths of the various local tumors; or whether the latter produced the bulbous enlargements of the nerves.

In consequence of the agonising pain produced by the growth of the tumors, the patient's health became seriously affected; the symptoms were similar to those in tic douloureux.

SECTION VII.

ORGANS OF SENSE.

Eye, with its Appendages.—Normal Anatomy.

-
- 566 Palpebræ of a fœtus, injected.
 - 567 Eyes of a child, palpebræ, muscles, and choroid coat, injected.
 - 568 Human eye, palpebræ, &c.
 - 569 Eye of an adult, muscles, palpebræ, lachrymal gland, and choroid coat, injected; nerves shown.
 - 570 Eyes of a fœtus.
 - 571 Eyes of a fœtus, iris injected.
 - 572 Eye of a fœtus, iris and choroid coat, injected.
 - 573 Choroid coat, injected.
 - 574 Eye, the iris blue.
 - 575 Eyes, human, of an adult, and of a fœtus, the iris blue.
 - 576 Eyes, tunics shown. Iris blue. From BELLINGHAM, the Assassin.
 - 577 Eye, the tunics shown.
 - 578 Choroid coat of an adult, injected.
 - 579 Eyes, of an adult, iris, choroid coat, ciliary nerves, &c. shown.
 - 580 Eye, human, the retina shown.
-

Comparative Anatomy—Normal, Abnormal, and Morbid.

Mammalia.

-
- 581 Eyes of a monkey, retina and foramen of Sœmmering, &c. shown.
 - 582 Eyes of a monkey, the foramen of Sœmmering shown.
 - 583 Eyes of a cat, tapetum, arteria centralis retina, &c.

- 584 Eyes of a cat, organised lymph obliterating the whole of the anterior chamber; the retina thickened.
 - 585 Eye of a dog, choroid coat, tapetum, &c.
 - 586 Eye of a dog, choroid coat, tapetum, &c.
 - 587 Eye of a bear, with the muscles, &c.
 - 588 Eye of a bear, the iris, choroid coat, optic nerve, &c. shown.
 - 589 Eyes of a seal—phoca.
 - 590 Eyes of a phoca, or seal.
 - 591 Eyes of a seal.
 - 592 Eyes of a kangaroo, ciliary processes very large.
 - 593 Eyes of a white rabbit, the choroid coat is not colored with pigmentum nigrum.
 - 594 Eyes of a myrmecophaga jubata. The eyes are remarkably small in this ant-eater. See the skeleton.
 - 595 Eyes of a peccary. Tajassu.
 - 596 Eyes of a horse, the tapetum, and the arteria centralis retinæ shown; also a portion of the sclerótica of a fish.
 - 597 Eyes of a horse. The anterior layer of the cornea reflected, and the very delicate cellular coat covering the choroid shown.
 - 598 Eye of a horse inverted, the crystalline lens in the anterior chamber; the iris and choroid coat shown.
 - 599 Eye of a horse; crystalline lens in the anterior chamber.
 - 600 Eye of a horse, with an opaque lens in the anterior chamber; the vitreous humor absorbed, and all the tunics, except the choroid, destroyed.
 - 601 Eyes of a horse; the coats shown, also a dense pearly cataract.
 - 602 Eye of a horse; a dense cataract, the vitreous humor absorbed.
 - 603 Eye of a horse; the humors absorbed, tunics thickened, a dense cataract, &c.
 - 604 Eye of a horse. A dense cataract in the anterior chamber; all the coats thickened, the vitreous humor absorbed; pus filled the choroid coat.
- Dray horses, and those employed in dragging heavy loads, and too highly fed, are liable to cataract; which I think is produced by a great determination of blood to the arteries distributed to the eyes, thus causing inflammation of the tunics; the capsule of the lens then bursts, or ulcerates, and the lens escapes into the anterior chamber.

- 605 Eye of a horse ; lens opaque, lymph in the anterior chamber.
- 606 Eye of a horse, with a pearly cataract.
- 607 Eye of a horse. The humors absorbed, the pupil obliterated, and the natural structure of the retina, and choroid coat destroyed.
- 608 Eyes of a llama,—ciliary processes very extensive. This is a beautiful preparation.
- 609 Eye of a giraffe,—the iris, choroid coat, ciliary nerves, &c. This is a very beautiful preparation.
- 610 Eye of a giraffe,—the muscles dissected, the iris, ciliary processes, and the internal surface of the choroid shown.
- 611 Eye of a sheep, cornea opaque, lymph in the anterior chamber, adhering to the pupil.
- 612 Iris and membrana pupillaris of a slink calf, injected minutely.
- 613 Eye of an ox, showing the puncta lachrymalia and ducts ; also the foramina belonging to the glandulæ Meibomianæ.
- 614 Eye of an ox, with opacity of the cornea, and organised lymph in the anterior chamber ; the hyaloid membrane thickened.
The morbid changes were produced by a blow with a stick.
- 615 Eye, and palpebræ of a bullock. An immense excrescence is seen on the inner surface of the palpebræ conjunctiva, and cornea ; which greatly resembles verrucæ, or chimney sweeper's cancer.
The tumor projected considerably ; it was about the size of a large melon ; the tarsi were covered with the same morbid growths, which were extremely vascular, and bled freely.
The structure of the eye, and optic nerve were not affected ; but the latter was greatly elongated. The lachrymal gland was normal, the brain healthy. I had not an opportunity of examining the viscera of the thorax, and abdomen ; but the animal was greatly emaciated. I think the disease might be denominated warty, or cauliflower carcinoma.
- 616 Eye of a Greenland whale. The sclerotica very dense, choroid coat and optic nerve shown.
- 617 Eye of a whale. A section shows the different tunics, the iris, foramina for the blood vessels, and nerves.
- 618 Eye of a whale, showing the structure of the sclerotica, a portion of the choroid coat, and the tapetum.

- 619 Eye of a whale, divided, to show the different tunics.

Aves.

- 620 Eyes of a bird, the choroid, iris, ciliary nerves, marsupium, &c. shown.
- 621 Eye of the golden eagle. The choroid coat, and marsupium, minutely injected with size and vermilion ; the lens and its capsule shown.
- 622 Eyes of an eagle ; tunics and marsupium shown.
- 623 Eye of the falco niger. The marsupium shown.
- 624 Cornea and sclerotica of an owl (strix) showing the osseous plates.
- 625 Eyes of a Hudson Bay owl. The bony plates of the sclerotica are shown on a large scale.
- 626 Sclerotica of a swift (hirundo apus) showing the bony plates.
- 627 Eyes of a pheasant—phasianus colchicus.
- 628 Eyes of a pheasant.
- 629 Eye of an African ostrich (Struthio camelus.)
The ciliary processes, marsupium, crystalline lens, &c. shown. This is a very beautiful preparation.
- 630 Eye of a New Holland ostrich, or cassowary. The marsupium, crystalline lens, &c. shown.
- 631 Eyes of a heron (Ardea cinerea), the marsupium shown.
- 632 Eyes of a gull.

Reptilia.

- 633 Eye of a young crocodile.

Pisces.

- 634 Eye of a fish ; tapetum, and arteria centralis retinae shown.
- 635 Cartilaginous coat of the eye of a fish.
- 636 Eye of a large shark. Squalus.
- 637 Eye of a shark. The muscles dissected, with the cartilaginous stalk which is attached to the sclerotica,

- near the optic nerve The membrana nictitans is also exhibited.
- 638 Eye of a shark ; muscles, coats, and cartilaginous stem, shown.
- 639 Eye of a sturgeon—*Accipenser sturio*. The muscles, optic nerve, and cartilaginous coat shown.
- 640 Eye of a sturgeon ; the dense cartilaginous coat which is situated between the inner surface of the sclerotica, and the external portion of the choroid is shown in the preparation.
- 641 Eyes of a cod-fish (*Gadus*) showing the tapetum, and arteria centralis retinae.
- 642 Eye of a conger eel (*Conger vulgaris*. Cuvier.)
The cornea was removed, and by slight pressure on the globe of the eye, the crystalline lens with its capsule, the vitreous humor and hyaloid coat, and the retina, protruded through the cornea. These appearances are shown in the preparation.
The iris, pupil, and crystalline lens, in this fish are disproportionate to the magnitude of the eye.
- 643 Eye of a conger eel. The cornea is removed, the iris, and pupil shown, also the choroid coat.
The eel measured 6 feet 10 inches.
- 644 Eyes of the wolf-fish ; *Anarchicas lupus*, dissected.
- 645 Eyes of the wolf-fish.
- 646 Eyes of the *Lophius piscatorius*. The muscles dissected, the cornea transparens and iris shown.
- 647 Cornea and conjunctiva of the *Lophius piscatorius*, cartilaginous.
- 648 Eye of the *Lophius piscatorius* ; the tunics shown, also the iris, which, in this curious fish, is remarkably large. The optic nerve gives off a great number of filaments, where the retina is formed ; which are preserved in the specimen.

Invertebrata.—Cephalopoda.

- 649 Eye of a cuttle fish, showing a plexus of nerves near the optic nerve.
- 650 Eyes of a sepia, or cuttle fish.

Arrest of Development.

- 651 Head and face of a mal-formed pig. The eyes united, and contained in one orbit.

- 652 Head of a pig.
 653 Cranium of a malformed lamb.
 Amonoculus; the eye is large, and placed in the centre of the os frontis.
-

Human Eye—Morbid Anatomy.

- 654 The superior palpebra, with an encysted tumor in the cellular tissue. From BELLINGHAM, the Assassin.
- 655 Eyes of a man 64 years of age, with a portion of the base of the brain. The structure of the eyes normal; but the tractus optici are greatly diminished in size. The former do not decussate.
- The membranes of the brain are greatly thickened, and the inner surface of the dura mater partly cartilaginous and osseous. The structure of the brain very dense, and inflamed.
- There were about two ounces of water in the lateral ventricles. The arteries at the base of the brain are ossified. See the diseased membranes of the brain, and the knee-joint, from the same patient.
- This is a very interesting preparation, not only as regards the morbid appearances, but also as to healthy structure.
- 656 *Eye of an idiot, 7 years of age, who was born deaf, blind and dumb, and had hydrocephalus, which caused death.
- The superior part of the calvarium was extremely thick and solid, and very vascular. There was a considerable quantity of fluid between the arachnoid membrane and the pia mater, and they were thickened; although the brain was extremely small, there was a great accumulation of fluid in the ventricles, and the structure was soft. The thalami and optic nerves were extremely small.
- See the cast of the head and face.
- 657 Eyes of a woman, who had been blind for many years. She died suddenly in a fit of apoplexy.
- Blood was effused, to the amount of four ounces, into the substance of the right anterior lobe of the cerebrum, and there were two ounces in the lateral ventricles; the thalamus opticus on this side was greatly diminished in bulk, and of a darkish brown

color. Most of the arteries at the base of the brain were cartilaginous, some ossified, and several of the minute ones obliterated. The scleroticæ were shrivelled into an irregular figure of small size, and contained nothing more than the lens converted into a calcareous mass.

- 658 Eye, the conjunctiva thickly covered with lymph ; pupil nearly obliterated ; lens opaque, and its capsule adhering to the iris ; the natural structure of the coats nearly destroyed.
- 659 Eye, the conjunctiva thickly coated with lymph ; the cornea completely destroyed ; crystalline lens opaque, choroid without pigment.
The effects of purulent ophthalmia ; both eyes were affected. From a child six weeks old ; the case had been neglected ; the brain became affected, and convulsions came on, which caused death.
The membranes of the brain were highly inflamed, likewise its substance.
- 660 Opacity of the cornea, adhesion of the iris at one point to the cornea ; the lens was opaque.
- 661 Eye, cornea ulcerated ; pupil nearly obliterated by organised lymph ; the internal structure destroyed.
- 662 Eye, cornea opaque, iris adhering to the inner surface of the cornea ; retina, and choroid coat thickened by lymph. Pus was found between these coats ; the lens opaque, and very dense in structure. The pigmentum nigrum having been absorbed, the choroid is quite white, as in the eye of an albino.
- 663 Eye, the cornea opaque, the iris adheres to the cornea.
- 664 Eye, the cornea opaque, iris adherent.
- 665 Eye, the retina thickened, lens opaque ; vitreous humor partly absorbed, which gives a puckered appearance to the choroid coat.
- 666 Eye, the crystalline lens opaque ; the vitreous humor partly destroyed ; retina thickened and plicated.
The two last preparations from the same subject.
- 667 Eye, the lens opaque, retina thickened.
- 668 Eye, showing disorganisation of all its internal natural structure, the cornea and lens opaque ; the effects of iritis.
- 669 Eye, cornea opaque, retina thickened, choroid nearly white, the vasa vorticiosa very distinct, the optic nerves diminished in size, and of a brownish color.

The crystalline lens was opaque, and felt like wax. From a man 60 years of age, who had been afflicted with cataract eight years.

- 670 Eye, with a pearly cataract.
- 671 Eye, with a pearly cataract ; the iris, choroid, and retina shown.
- 672 Eye, with a cataract.
- 673 Eye, with a pearly cataract ; the retina thickened.
- 674 Eye, crystalline lens opaque, iris and the choroid without pigment.
- 675 Eye, with a cataract ; the iris adheres to the inner surface of the cornea. From an old subject.
- 676 A pearly cataract, which was extracted. From a man 70 years of age ; the operation successful.
- 677 Eyes of a boy 16 years of age, with a calcareous cataract in both eyes.

Mr. LAWRENCE describes these calculous concretions in the eye, in his invaluable Treatise on the " Diseases of the Eyes."

He was deprived of sight at an early period of his life by confluent small pox.

The eyes became staphylomatous, and the corneæ appeared cartilaginous ; the arteries of the conjunctivæ were greatly congested, and very tortuous, and the globes of the eyes projected beyond the palpebræ.

During the last two years of his existence, he had been subject to severe pain in the eyes and head ; the accumulation of fluid in the eyes increased, which produced a hideous appearance. With a view of endeavouring to lessen his sufferings, and to prevent the disfiguration of his features ; I considered it right to puncture the corneæ. A considerable quantity of water escaped, the tunics gradually collapsed, and the eye-lids closed ; which made his appearance less disgusting. The symptoms were relieved, and he enjoyed good health till the 5th of April, 1821, when he was attacked with typhus fever, accompanied with purpura hæmorrhagica all over his body ; the latter appeared two days previous to his death. He died on the 14th day from the commencement of the attack.

Post mortem. All the vessels of the brain were excessively turgid ; the arachnoid and pia mater inflamed ; there was a considerable effusion of blood between them.

The brain was very firm in structure, and inflamed ; and the lateral ventricles contained nearly an ounce of serum, mixed with blood. The tractus optici and optic nerves were much diminished in size ; but they did not appear of that dark color, noticed where blindness has been occasioned by organic disease in these parts, from amaurosis. The scleroticæ were greatly contracted, and very irregular in figure ; they only contained the morbid lenses, with fragments of some of the coats of the eyes. I have given the particulars of this case more fully than any of the other descriptions of diseased eyes, as I consider it in many points very interesting.

- 678 Eye, the vitreous humor converted into bone, as is the crystalline lens ; all the tunics, except the scleroticæ nearly destroyed ; the optic nerve not affected. From a very old man ; there was likewise a fistula lachrymalis. This is an unique preparation.

Mr. LAWRENCE, in his Treatise on the Diseases of the Eye, Section 5, describes ossification of various parts of the eye.

Malignant Disease.

- 679 Eye of a man 50 years of age, affected with fungus hæmatodes, &c.

The internal structure of the eye absorbed, the scleroticæ and cornea distended with fungoid matter, and a dense structure, resembling carcinoma, in irregular tubercles. The optic nerve retains its natural structure.

The history of this case is not known.

- 680 Eye, with a portion of brain, affected with fungus hæmatodes, and carcinoma. From a boy about 7 years of age.

The left eye was affected with fungus hæmatodes ; the cornea ulcerated, and a fungus protruded considerably beyond the palpebræ. Febrile symptoms, with delirium came on about three weeks before death, and it was found that the child could not see with the right eye. The cerebral disease increased, and he died suddenly, about three weeks after the appearance of the fungus.

The arachnoid and pia mater were thickened, the substance of the brain was soft, and the lateral ventricles contained four ounces of serum. The fungus and contents of the orbit formed one mass of medullary structure, in which nothing could be seen of the normal parts, except a trace of one or two muscles, the sclerotica, and the optic nerve. The latter was enlarged, and converted into medullary substance. The enlargement increased as it proceeded towards the thalamus. The thalami, corpora striata, pons Varolii, and adjacent parts, were so softened by medullary degeneration, that no detailed description of them can be given.

The right optic nerve was not diseased, it was quite separate from the left. The membranes at the base of the brain were inflamed, with partial purulent infiltration.

The absorbent glands in the course of the internal mammary vessels, on both sides, were converted into medullary substance.

The pleura lining the fourth, fifth, and sixth true ribs on the right side was thickened, highly vascular, and raised into a small swelling, which was found to consist of a reddish grey soft medullary deposit. This growth, arising from the substance of the rib, which was much diminished in size, had made its way through the periosteum. The interior of the other ribs was unnaturally red. The liver was of a pale yellow color; the other viscera were healthy. The history of this case is related in Mr. LAWRENCE'S Treatise on the Diseases of the Eye, Section 10, on Fungus Hæmatodes. See the diseased rib.

681 Section of an eye, affected with melanosis. All the tunics, except the sclerotica, destroyed; the cornea thickened.

682 Eye, affected with melanosis, as was the brain. The whole of the tunics, except the sclerotica, were destroyed. The melanoid matter within the eye is of immense magnitude, and projects through the cornea, and palpebræ, and rested on the cheek and side of the nose.

The globe and other orbital contents were converted into an uniform mass, of sooty blackness, from which a thick black fluid could be scraped and squeezed out,

similar to that which had flowed from the fungus during life. The disease was continued through the optic nerve into the skull. The nerve itself was converted into a soft black substance, and expanded, after passing the foramen opticum, into a soft black tumor, as large as a small orange, situated under the anterior lobe of the brain, and partially penetrating into its substance.

In the liver there were two depositions of a similar character, one about the size of a walnut, the other that of a pea; and there was a carcinomatous tumor in the left parotid gland.

From a corpulent woman, 45 years of age; her general health was not much affected, until a few weeks before death, when symptoms of cerebral disease came on, and the patient died comatose about eighteen months from the commencement of the attack.

This is an invaluable specimen of melanosis.

The history of this case is related in Mr. LAWRENCE'S Treatise on the Diseases of the Eye, Section 5.

See the diseased liver, and cast of the head, face, and tumor.

TEGUMENTARY TEXTURES.

Normal Anatomy.

- 683 Foot of a horse, injected with size and vermillion. From careless shoeing the point of a nail was driven into the vascular part, which occasioned great pain, and inflammation; tetanus supervened, and as there was no probability of saving the poor animal, he was shot. In the same bottle is the foot of a very young foal, injected. The appearance in the vascular part, which was produced by the nail, is shown in the specimen.
- 684 Foot of a foal, injected with size and vermillion.

Morbid Anatomy.

- 685 Skin affected with purpura hæmorrhagica; together with a part of the intestinum ileum, showing a great determina-

tion of blood to the minute arteries belonging to the mucous surface, &c. the effects of purpura hæmorrhagica.

686 Two portions of skin affected with purpura hæmorrhagica. The cuticle of one of the specimens is reflected, to give a more distinct view of the disease.

687 A portion of skin affected with purpura hæmorrhagica; several parts of the body showed signs of this disease; the liver was granulated, and there was water in the abdomen. Preserved in alcohol.

688 A portion of skin, showing petechiæ.

689 A portion of skin, showing the effects of scarlatina, dried and preserved in spirit of turpentine.

690 Two portions of skin, showing confluent small pox, at an early stage, connected with purpura. From a man of robust habit, 24 years of age. Purpura was seen beneath the serous covering of the lungs; they were gorged with blood; there were likewise signs of purpura beneath the peritoneal surface of the abdominal and pelvic viscera; the internal surface of the stomach and intestines was affected in a similar manner, and all the arteries were inflamed. The antiphlogistic mode of treatment was not employed in this case.

691 Two portions of skin, showing ichthyosis. From a man; the liver, and mucous glands of the intestines were affected with medullary sarcoma.

692 Left hand, showing extensive laceration of the integuments, &c. of a portion of the palm; occasioned by the bursting of a gun.

I amputated the arm soon after the accident. Several arteries were secured; I cut off both ends of the ligature which was applied to the radial artery. The stump healed favorably, and the ligatures in the course of eight days separated. About three weeks after the operation, pain was complained of in the inner surface of the fore-arm; the integuments inflamed, and an abscess formed, which I opened; to my surprise, the ligature which had been secured around the radial artery escaped with the pus. The swelling and inflammation soon subsided, and the wound healed.

This fact convinced me of the impropriety of cutting off both ends of the ligatures in amputations. But in a case of exomphalos, where I was obliged to remove a portion of omentum, and tie several

arteries, both ends of the ligatures were cut off, and no bad effects were produced.

- 693 Sacrum, the integuments sphacelated, the bone denuded, the theca vertebralis highly inflamed. From a woman 64 years of age, extremely corpulent, who had been confined in bed with paraplegia, for several months. The urine and fæces passed involuntarily, and the nurse not having kept the patient clean and dry, the integuments covering the sacrum and coccyx became inflamed, sphacelated, and the bones were denuded. Symptoms of typhus fever ensued, and the patient died.

The theca vertebralis in the sacrum and the spinal canal, as far as the third dorsal vertebra, was in a sloughy state, and the spinal marrow and nerves were of a blackish color. The membranes of the brain were highly inflamed, and in some parts thickened; fluid was effused beneath them, and there was a considerable quantity of serum in the ventricles. The substance of the brain was rather firm, but there were no signs of apoplectic cells; proving this to have been a case of serous apoplexy.

The thoracic viscera were not diseased; the liver was large and granulated.

SECTION VIII.

ORGANS OF RESPIRATION.

Morbid Anatomy.

694 Os hyoides and larynx (human), the thyroid and cricoid cartilages partly converted into bone.

695 Base of the tongue, with the fauces, larynx, trachea, and bronchi, and the thyroid gland, which is very large. The patient, a man 23 years of age, corpulent, and of a full habit of body, was seized (after bathing in cold water) with symptoms of fever, and an eruption on the skin, resembling scarlatina, accompanied with head-ache, and inflammation of the fauces. He was bled freely (the blood was cupped and buffed), and other depletory means were employed to subdue the inflammatory action, but without effect; he became delirious, and the vessels of the conjunctivæ were greatly injected with blood; he could not swallow, and became extremely restless; he died on the third day from the commencement of the attack. There was a considerable effusion of serum between the arachnoid membrane and the pia mater, the latter was highly inflamed.

The substance of the brain was firm and inflamed; there were nearly four ounces of water in the lateral ventricles; the septum lucidum was softened.

All the viscera in the thorax and abdomen were surcharged with blood; the lungs healthy, but greatly distended by air, blood, and mucus. There was about an ounce of water in the pericardium; the heart small, but normal: the internal surface of the auricles and ventricles inflamed, as were the coats of the pulmonary artery and aorta, and the vasa vasorum were extremely numerous, and very large.

The right subclavian artery, at its origin, was considerably lessened in its caliber, by a thick deposition of lymph, which was as firm as fibrine, and would in time have obliterated the trunk at this part. All the abdominal viscera healthy.

My reason for describing the history of this case so fully is, because I consider it in many points of view highly interesting.

From the plethoric state of body of this patient, and his having lived rather luxuriously, I am induced to imagine, that this was a case of arteritis, and that in all probability the effusions of fluid into the different cavities, had in a certain degree, taken place previous to his having bathed in cold water, and that the effusion was increased by the febrile action caused by bathing. I shall dwell more on arteritis in describing some other cases.

696 Larynx and trachea of a man 40 years of age; who for several years had suffered, at different times, severe attacks of catarrh, which affected his voice; he was also afflicted with piles, and fistulæ in ano.

Symptoms of phthisis pulmonalis proceeded gradually; he expectorated pus, his breathing was very laborious, and he became greatly emaciated. A short time previous to his death, an abscess formed beneath the integuments at the superior part of the sternum; it was opened, and the matter discharged was of a scrofulous kind. Hectic fever came on, accompanied with diarrhœa.

Inspectio. The lungs on both sides were almost solid with miliary tubercles, and there were a great number of vomicæ. The surface of the epiglottis, the lining of the larynx, and the chordæ vocales were greatly thickened by chronic inflammation.

Most of the mesenteric glands were affected with scrofula, and there were a great number of fistulous openings in the rectum.

697 Larynx and trachea of a man, who had suffered from the effects of chronic catarrh, and had lost his voice for several years.

The whole lining of the wind-pipe was thickly coated with coagulated lymph; but this was more obvious in the larynx, where it was deposited in a granular form, as seen in the preparation.

The sacculi laryngis were nearly obliterated by lymph, the rima glottidis, and the epiglottis, were greatly thickened and shortened, and ulceration of the arytaenoid cartilages had commenced. The pleuræ adhered firmly, and the structure of the lungs had in some parts become consolidated by inflammation.

- 698 The fauces, larynx, and trachea of a child. The patient was suddenly attacked with all the symptoms of cynanche trachealis; convulsions came on, which caused death a few days from the commencement of the disease.

Lymph was deposited only on the lining of the larynx, and a small portion of the trachea, it adhered very slightly; the lining of the trachea and bronchi, and their ramifications was inflamed; but lymph had not been effused, and the lungs were not consolidated.

I am inclined to think that the life of this child might have been saved, if tracheotomy had been performed.

- 699 Base of the tongue, pharynx, larynx, and trachea of a boy, 6 years of age, who died from the effects of croup.

The lungs were consolidated, and there were a great number of scrofulous tubercles in them. The bronchial tubes, bronchi, and trachea were inflamed, and covered with coagulated lymph; in the larynx the lymph was thick, and adhered firmly to the internal lining. The history of this case is not known.

Tracheotomy in this instance would not have been advisable.

- 700 Larynx, pharynx, trachea, and bronchi of a girl, 6 years of age, who died from the effects of cynanche trachealis, on the third day from the commencement of the attack.

The lungs were consolidated by sero-purulent infiltration and coagulated lymph; the bronchial tubes were filled with pus and mucus. The internal surface of the bronchi, trachea and larynx thickly coated with lymph, and an adventitious tube had formed, which did not adhere to the surface of the trachea; a portion of this is preserved in the preparation, the other part was removed.

- 701 Larynx and trachea of a boy, 6 years of age. He had a very severe attack of pneumonia, and although

active treatment had been adopted to check the progress of this disease, cynanche trachealis supervened; the difficulty of breathing became very alarming, and he lost his voice.

A consultation was held, to determine whether tracheotomy ought to be performed; after carefully exploring the chest, it was ascertained that there was organic disease in the lungs, and therefore this was not done. The symptoms became more distressing, convulsions came on, and the patient died.

The pleuræ on both sides of the chest were highly inflamed, but lymph had not been effused. The lungs were exceedingly dense, and sunk in water; they were nearly filled with miliary tubercles, and partly loaded with sero-purulent infiltration. The bronchial tubes were filled with pus and mucus, and their internal lining was highly inflamed, as were also the trachea and larynx. The latter, and the rima glottidis were greatly thickened by coagulated lymph, which adhered firmly,—a morbid change which accounts for the aphonia. The abdominal viscera were healthy.

702 The tongue, pharynx, larynx, trachea, and bronchi; the heart and its arteries are also preserved.

This is a very beautiful preparation. The patient was a boy 14 years of age.

The glandulæ concatenatæ on both sides of the neck had been greatly enlarged for a considerable length of time, and affected his respiration. He was attacked with cynanche tonsillaris, which he imagined was caused by taking cold. The inflammatory symptoms were very great, and accompanied with a high state of fever; the velum pendulum palati, and uvula became greatly inflamed and enlarged, and affected his breathing and swallowing. The symptoms increased in violence, although the most active treatment had been pursued by the professional gentleman who attended the patient. The fauces began to slough, and symptoms of cynanche trachealis came on, followed by petechiæ all over his body; his pulse 140 in a minute. I was (at this period) consulted, to know whether it would be advisable to perform tracheotomy. All the symptoms appearing so unfavorable, and there being every reason to

believe he could not survive many hours, I did not think it right to operate. He only lived twelve hours from the time I saw him.

The lungs were rendered remarkably solid by miliary tubercles, and interstitial depositions of lymph and pus, and the bronchial ramifications were loaded with pus and mucus. The velum pendulum palati was covered in some parts by lymph, and in other portions was sphacelated. The covering of the epiglottis, the rima glottidis, and the larynx, were thickly coated with coagulated lymph, which adhered firmly.

The lining of the trachea was highly inflamed, and a very delicate adventitious tube had formed, but it did not adhere to the internal membrane of these parts. A portion of this tube is shown in the preparation, in the right bronchus. The abdominal viscera were healthy. The remains of the ductus arteriosus are seen in the preparation, with the termination of the vena cava inferior, and the Eustachian valve.

It would be very difficult to decide in this case, whether the inflammatory action commenced in the substance of the lungs, thence affecting the inner surface of the bronchial tubes, and lastly the trachea and fauces; or whether it proceeded in the reverse direction. From what I have noticed in other cases I should say, the disease extended from the lungs. This must be considered a most important fact in practice, to be able to decide, particularly in cases of genuine croup, where tracheotomy seems the only chance of saving the life of the patient.

In the last stage of phthisis pulmonalis, the internal lining of the bronchi, trachea, and larynx, frequently becomes inflamed, and ulcerates.

703 Larynx, and part of the trachea of a man, who died of chronic croup. The lining of the epiglottis and larynx, thickened by coagulated lymph, and in some parts ulcerated; the lungs were hepatised.

704 Trachea and larynx of a man. The larynx and trachea thickly coated with organised lymph; the lungs were hepatised. The patient died from the effects of chronic croup.

The patient was 18 years of age, he had pseudo-syphilis,

for which he was severely salivated, and was of a strumous habit. Inflammation of the tonsils, and velum pendulum palati came on, which terminated in sloughing phagedæna, and extended into the fauces and the larynx; the patient lost his voice, and his life was in great danger.

He was discharged from the Hospital he had been in, and was afterwards put under a course of sarsaparilla, with tonics and acids: his health gradually improved, but he never regained his voice, and he dreaded taking either solids or fluids, lest he should be suffocated. In the course of two years from his leaving the Hospital, symptoms of phthisis pulmonalis came on, which caused his death.

The lungs contained a great number of scrofulous tubercles, and there were several large vomicæ; the bronchial tubes were loaded with mucus and pus.

The base of the tongue, tonsils, the epiglottis, and the covering of the rima glottidis had been partly destroyed.

The liver was extremely large, very pale-colored, and there were a great number of disseminated tubercles in its substance; the gall-bladder contained a large quantity of green bile.

The destruction of the epiglottis, and the imperfection of the rima glottis, satisfactorily accounts for the difficulty he experienced in deglutition.

In 1808, I related this case at the Medical Society, of Bartholomew's Hospital. Mr. BARNES,* the House Surgeon, described a case of venereal sore throat, where there had been extensive sloughing of the tonsils, the velum pendulum palati, and epiglottis; in a violent fit of coughing, the latter was ejected, and the man died. Mr. ABERNETHY also mentioned a case where the epiglottis was found in the stomach; he said such cases were rarely seen.

705 Pharynx, larynx, and trachea. The patient 6 years of age, was attacked rather suddenly with symptoms of influenza (which in 1838 was very prevalent, and proved fatal to many), the febrile action was violent; inflammation of the throat came on, which increased rapidly, and terminated in sloughing of the

* Now one of the Surgeons to the Exeter Hospital.

tonsils and fauces. The patient at this period experienced great difficulty in swallowing and breathing, as in cynanche trachealis; convulsions succeeded, under which he expired.

The tonsils and fauces were ulcerated, and in a sphacelated state; the lining of the trachea, and the rima glottidis, were thickened by lymph.

With this specimen there is another, showing similar morbid appearances. From a child, much younger than the former, belonging to the same family.

- 706 Larynx, and trachea of a man, who died of phthisis pulmonalis. He was 35 years of age, and had shown symptoms of pulmonic disease for several years. About a month previous to his death, he complained of pain in his trachea, and experienced great difficulty in breathing, and occasionally he had violent paroxysms of coughing, accompanied with a stridulous sound, dyspnœa, and purple color of the face, symptoms so generally noticed in cynanche trachealis; and he lost his voice. The expectoration was purulent, he had hectic fever, and colliquative diarrhœa.

The pleuræ were adherent on both sides of the chest, the lungs were nearly filled with scrofulous tubercles, and there were several vomicæ. In many of these excavations, the bronchial tubes, and some of the blood-vessels were insulated, and their external surface was coated with coagulated lymph. The internal surface of the trachea and bronchi was inflamed; lymph had been deposited in many parts, and ulceration had taken place in numerous small points.

All the abdominal viscera were healthy, except the mucous glands of the ileum and cæcum, which were greatly enlarged, and in some parts ulcerated.

- 707 Larynx, trachea, and thyroid gland, of a boy about 2 years of age. Symptoms of pneumonia came on, attended by a cough resembling pertussis, and about a week previous to his death he was seized with convulsions.

The internal lining of the larynx and trachea, highly inflamed; small points of ulceration, had taken place in many parts, more evidently on the epiglottis and the rima glottidis. The lungs were partly hepatised, and there were a great number of miliary tubercles

in them ; the bronchial tubes were filled with pus. The foramen ovale open. The mesenteric glands, and the mucous glands in the small intestines were affected.

The description of the heart from this subject is given in the Section on Morbid Hearts.

- 708 The inferior portion of the trachea, and bronchi ; the annuli in some parts converted into bone. The epiglottis, rima, and chordæ vocales very large.

The patient, 60 years of age, was a watchman ; he had a stentorian voice. He died of hydrops pericardii ; the parietes of the left ventricle were very thick ; the cavity capacious ; mitral valve semicartilaginous ; the aortic valves ossified.

The coronary arteries in their caliber greatly diminished. The patient showed no signs of angina pectoris ; it appears rather singular that the muscular structure should have continued so firm, with such a morbid state of the nutrient vessels.

- 709 Tongue, larynx, trachea, with the thyroid gland. The patient, a woman, died of confluent small pox, in the latter stage of the disease.

The gums were covered with sordes, and the tongue and fauces were in an aphthous state, but not from the effects of pustules.

There were no signs or trace of pustules either on the lining of the larynx, trachea, or œsophagus. Two portions of the integuments belonging to this patient are preserved in the preparation, to show the small-pox pustules ; there is also a trachea to exhibit the natural state.

I have examined a great number of patients who died of small-pox, at different stages of the disease ; but I never saw any signs of pustules on the tongue, trachea, or œsophagus. I think the aphthous appearances, have been by some, considered to be the effects of pustules.

- 710 Tongue, pharynx, and trachea. The patient 24 years of age, had been in a very delicate state of health for several years, and during the last eight months of her life had shown signs of consumption. About a month previous to her dissolution, she experienced great difficulty in breathing, and was teased with a frequent cough ; she also complained

of great pain in the wind-pipe, and lost her voice. The difficulty in breathing became so distressing, as frequently to threaten suffocation. With a view of affording temporary relief, tracheotomy was performed by the gentleman who attended her. This had the effect of lessening the patient's sufferings; but she only lived a fortnight from the time the operation was performed.

The lungs on both sides of the chest were consolidated with miliary tubercles, and there were several large vomicæ; the bronchial tubes were filled with pus.

The lining of the bronchi was greatly inflamed, in some parts ulcerated; the trachea was also congested, and the larynx and rima glottidis were thickly covered with coagulated lymph. All the abdominal viscera normal.

The opening into the trachea had been made between the inferior part of the thyroid cartilage, and the superior part of the cricoid; this is shown in the preparation.

711 The larynx, and part of the trachea of a man. The right lobe of the thyroid gland was of immense magnitude, and extended downwards below the clavicle; there was a large artery on its external surface, but from the morbid parts not having been removed properly, it would be very difficult to state whence it had its origin.

On cutting through the tumor, it was found to contain coagulated blood, which had formed a cyst resembling that belonging to a large aneurism, and its internal surface was thickly coated with coagulated lymph, which adhered very firmly.

On examining the larynx, the internal lining covering the rima glottidis was found ulcerated.

The question is, Whether this is to be denominated an aneurism, or a malignant disease?

As there was no cerebral matter mixed with the coagulated blood, I should not consider it was a case of fungus hæmatodes; I am therefore inclined to think it an aneurism, occasioned by the bursting of one of the thyroid arteries.

The disease was considered by his Surgeon, to be a bronchocele; and as the patient's breathing was greatly distressed, and a sense of fluctuation was

felt in the tumor, it was thought advisable to puncture it, to afford temporary relief. A considerable quantity of florid blood escaped, and continued to flow from the opening, which caused the death of the patient.

- 712 Base of the tongue, pharynx, larynx, trachea, and thyroid gland. The patient, 55 years of age; had been afflicted with disease of the thyroid gland for nearly three years. For some time previous to her dissolution, she experienced great difficulty in swallowing, and gradually lost her voice. The symptoms increased in violence, and she could only take fluids in small quantity; her health became seriously affected, and skin sallow; she was greatly emaciated, and appeared to die of inanition.

The thyroid gland was carcinomatous; the right lobe had formed a firm union with a portion of the trachea and œsophagus; it had compressed both these tubes, but more especially the œsophagus, and had produced a stricture, which was situated at about two inches from the commencement of this tube; the coats at this part had ulcerated, which is shown in the preparation. The lining of the larynx, rima glottidis and trachea was thickened. The lungs were affected with carcinoma.

The tongue, pharynx, larynx, trachea, and bronchi are shown; also the sublingual glands, the nerves and muscles of the tongue, likewise the thyroid gland, the glandulæ concatenatæ of the neck, and the bronchial glands.

Carcinomatous tubercles had formed in the cellular media, belonging to the coats of the œsophagus, at the superior and anterior part; they had progressively produced absorption of the muscular and mucous coats, had projected into the pharynx, and extended upwards as far as the covering of the rima glottidis, compressing them considerably; the morbid action had also proceeded some distance along the œsophagus; these appearances are well displayed in the specimen.

On cutting open the anterior part of the trachea, the internal lining (in a small circle) had been absorbed, and a portion of the thyroid cartilage deprived of its perichondrium, projected through this aperture into

the trachea. The bronchial glands, and the glandulæ concatenatæ were converted into carcinomatous and melanoid tumors. The thyroid gland not affected. There were several cancerous tubercles in the lungs. This is an invaluable preparation.

- 713 A portion of the left bronchus, the internal surface thickened by organised lymph; one of the bronchial glands converted into a calcareous mass.

From a man, the history of the case is not known.

- 714 Trachea and bronchi; the internal surface highly inflamed; the bronchial glands converted into medullary sarcoma, the external appearance resembling what Mr. ABERNETHY denominated "Pancreatic Sarcoma." The lungs were affected with the same disease. See the Section on Diseased Lungs.

- 715 Trachea and bronchi; from a patient who died of phthisis pulmonalis. The internal lining greatly inflamed.

- 716 Trachea, bronchi, and a portion of lung; the internal lining highly inflamed, and ulcerated; the lung consolidated by miliary tubercles, and sero-purulent infiltration.

From a patient who died of phthisis pulmonalis; there were also vomicæ in the lungs.

- 717 The inferior part of the trachea, bronchial glands, &c. The patient, a man, died of phthisis pulmonalis, 30 years of age. The lining of the trachea and bronchi highly inflamed, and ulcerated; the bronchial glands scrofulous. The lungs were filled with miliary tubercles, and there were several large excavations.

- 718 A portion of lung; the pleuræ thickly covered with unorganised lymph, the effects of pleuritis. The structure of the lung healthy.

- 719 Pleuræ excessively thickened by coagulated lymph, which was organised; the pericardium and heart are also shown in the preparation.

The patient, a very delicate girl, 8 years of age, was attacked with symptoms of peripneumonia, which became very distressing, although active treatment was employed by the gentleman in attendance. She complained of great pain in the left side of the chest, near the region of the heart, and great difficulty in breathing; pulse so very rapid, small, and irregular, that it was impossible to count the number of beats

in a minute; she was extremely irritable, and appeared greatly exhausted. On exploring the chest, the left side was found to be much larger than the right, and the abdomen greatly distended with fluid. It was now evident that empyema was the cause of the enlargement of the thorax; but there was some difficulty in accounting for the effusion into the abdomen.

The case being complicated, and the patient appearing in a dying state, it was not considered prudent to perform paracentesis thoracis. The child died on the fifteenth day from the commencement of what was supposed to be pleuritis.

On opening the abdomen, the left side of the diaphragm was seen to have descended, in the form of a large sac, nearly as low as the crista of the ilium. The cause of this protrusion was found to be pus, which filled the left side of the chest, and with that in the sac, measured seven pints.

The pleuræ were greatly thickened by organised lymph, also the external surface of the pericardium, and the lung was compressed, and completely impervious to air, as shown in the preparation.

The internal surface of the pericardium, and its reflected portion were inflamed, but lymph had not been effused, and there was not more serum in the bag than natural. The heart was large, as were the vessels of the arch of the aorta; its muscular structure very soft; the valves natural. The lungs on the right side of the chest were so much distended with air, as to appear too large for the cavity. The internal structure healthy; but the pleuræ were inflamed, and there were six ounces of fluid in the cavity.

The serous surface of the inferior part of the diaphragm was highly inflamed, and partly ulcerated; and if the patient had lived a little longer, an opening in the diaphragm would have been formed, and the pus in the left side of the chest would have escaped into the cavity of the abdomen. The abdominal viscera were healthy.

The result of the post-mortem examination proves clearly, that the effusion into the chest had been going on insidiously for a considerable length of time.

720 Pleura costalis, immensely thickened by organised coagulated lymph, the result of chronic inflammation.

- 721 Pleura pulmonalis, thickened by coagulated lymph, organised. The structure of the lung partly consolidated by inflammation, and in one portion there are small excavations, or vomicae. From a man who died of phthisis pulmonalis.
- 722 Pleura pulmonalis, thickly coated with coagulated lymph, which was organised; the structure of the lung is remarkably solid from the effects of chronic inflammation, and sero-purulent infiltration, and in some portions of the lungs there were several sacs containing pus. The bronchial tubes, the bronchi, and trachea, were filled with pus, and the lining highly inflamed, and in some parts ulcerated. The pericardium was inflamed, and lymph deposited on its surface, which was easily detached. The abdominal viscera, with the exception of the intestines, were healthy, the latter greatly distended with air, and the mucous glands of the ileum enlarged, and in some portions ulcerated. The patient, who was 19 years of age, had been under the care of several physicians; I was informed that the blood taken from a vein in the arm was highly inflamed.
- 723 Pleura pulmonalis inflamed, and thickly coated with coagulated lymph, which adhered firmly; the lungs were hepatised. A child, 2 years of age, had great difficulty in breathing, with lips of a purple color. The pleurae thickly covered with coagulated lymph, the lungs on both sides consolidated; the bronchial tubes were partly obliterated, and the bronchi and trachea nearly filled with pus. There were a few miliary tubercles in the lungs, and some of the mesenteric glands were converted into caseous matter. The abdominal viscera healthy.
- 724 Pleura, thickened by lymph; the lung rendered solid by small miliary tubercles, and deposition of lymph in the cellular tissue. This is a frequent occurrence in scrofulous subjects.
- 725 Pleura pulmonalis, thickly covered with organised lymph; the natural structure of the lung destroyed by very minute miliary tubercles, and interstitial deposits of lymph, which had become organised. The patient was a female 19 years of age. The pleurae on both sides of the chest were greatly

condensed by coagulable lymph; the lungs were nearly filled with miliary tubercles. There were five pints of water in the chest. The heart normal, all the abdominal viscera healthy, but the peritoneum was inflamed.

- 726 Pleura pulmonalis, thickly covered with lymph, which had become organised, and had formed an adventitious membrane, which adhered very firmly. In one of the lobes of the right lung near its superior and external surface, an abscess had formed, which had caused absorption of a portion of the pleura, and also made two large apertures in the adventitious coat, which allowed the pus to escape from the abscess, into the cavity of the thorax, producing empyema. Several of the small bronchial tubes open into the cyst of the abscess.

The pleura pulmonalis and costalis were thickly coated with coagulated lymph, and firm adhesions had formed between them; the lungs were greatly compressed, and the internal surface of the main bronchial tubes were greatly thickened by coagulable lymph, particularly near the abscess, which is also preserved in the specimen.

The pleuræ on the left side were thickly coated with lymph, and there were a great number of scrofulous tubercles in the lungs. The abdominal viscera, healthy.

- 727 Pleura pulmonalis covering the diaphragm, thickly lined with organised lymph.

A portion of liver and diaphragm shown. The patient, a man 40 years of age, died from the effects of empyema.

- 728 Two portions of lung, showing lymph on the pleura pulmonalis, also long delicate adhesions between the surfaces. The effects of pleuritis in a child.

- 729 Pleura pulmonalis, thickened by organised lymph. There were firm adhesions between the pleura pulmonalis and costalis on both sides.

The lungs were nearly consolidated by sero-purulent infiltration, and there were several abscesses, of different sizes, in the substance of the lungs. A portion of the cyst of one of them is seen in the preparation; its internal surface exactly resembles that of a vomica.

The history of this case is not known.

- 730 Pleura pulmonalis, thickly coated with organised lymph; there were large vomicae and a great number of scrofulous tubercles in the lungs. The mesenteric glands were caseous; the mucous glands of the ileum were enlarged, some of them ulcerated.
- 731 The lungs and heart, and the trachea of a child; the lungs minutely injected. There was a considerable quantity of pus in both sides of the chest. The pleurae were thickly covered with organised coagulable lymph, particularly the pleura of the lung in the left side of the chest, and the surfaces were so agglutinated, as to obscure the division of the two lobes. On the right side, an adventitious membrane has formed; the lung was greatly flattened, and hepatised; the effect of acute inflammation.
- The history of the case not known.
- I have seen similar morbid appearances in patients who died from the effects of cynanche trachealis, or pneumonia.
- This is a very interesting preparation.
- 732 Pleura costalis, immensely thickened by chronic inflammation.
- 733 Pleura costalis, dried, showing ossific deposits.
- 734 A portion of lung and liver, from a man who had for many years been afflicted with asthma; in a sudden paroxysm of coughing, a portion of the pleura pulmonalis of one of the lobes in the left side was lacerated, which allowed the air to escape from the lung into the cavity of the chest, producing pneumothorax, which occasioned sudden death.
- I inspected the body of the late Mr. FULLER, Dentist, who died suddenly from the same cause. In both these cases, the lungs were completely collapsed, as might be expected to be the case, where the air had escaped into the chest. The lungs on the right side were emphysematous, and many of the cells were greatly enlarged.
- The structure of the lungs remarkably soft, and easily broken down by the pressure of the fingers; they were infiltrated with a black fluid, as in melanosis.
- The liver, spleen, and several other viscera diseased.
- 735 A portion of lung, with carcinomatous tumors on the pleura of considerable magnitude; the latter immensely thickened. There was also a fungoid

tumor in the thigh, which was removed ; the history is given in the Section on Tumors.

- 736 Carcinoma affecting the pleura pulmonalis and costalis on the left side of the chest, causing compression of the lung on this side, and adhesion of the pleura pulmonalis to the pleura covering of the pericardium. The adhesions were occasioned by a thick deposition of lymph between the pleuræ on the left side of the chest, and by a carcinomatous affection of the absorbent glands on each side of the sternum.
The lungs were greatly disorganised by cancerous tumors, some of which were as large as a walnut.
- 737 A beautiful specimen of ramifying coagulated lymph, in firmness resembling fibrine. Some portions were coughed up from the bronchial tubes by a patient afflicted with cynanche trachealis ; the remainder were removed after death.
A similar preparation is published in HUNTER's Treatise on the Blood, with an engraving.
- 738 A portion of lung, dried, to show enlarged air cells, taken from a patient who had been afflicted with asthma for many years.
- 739 A portion of lung, dried, showing the effects of emphysema. From a patient who had been affected for many years with asthma.
- 740 A portion of lung, showing interlobular emphysema. The patient 65 years of age, had suffered from asthma for nearly six years.
This is a beautiful specimen.
- 741 Emphysema of the lungs. The lungs are minutely injected.
This is a very beautiful preparation.
There are two portions of lung in the bottle ; one piece is hepatised, the effect of inflammation.
- 742 Apoplexy of the lung. The lungs were nearly solidified by blood, from the rupture of branches of the pulmonary artery, which caused death.
The coagulated blood was removed, to show the appearance of the cellular tissue. He had suffered several attacks of hæmoptysis, there were but a few tubercles in the lungs ; the liver and the other abdominal viscera were healthy.
- 743 A splendid specimen of apoplexy of the lung, preserved in alcohol. The patient died from hæmorrhage.

744 A portion of lung, which had been consolidated by effusion of blood into the cellular tissue; some of the blood was squeezed out, to show the ragged state of the cellular media.

745 A portion of lung, consolidated by sero-purulent infiltration, and thickened cellular tissue, the effects of inflammation.

The patient, a man 46 years of age, had laboured under symptoms of hydro-thorax for several months, accompanied with palpitation of the heart, and irregularity of the pulse; he died suddenly.

There was a considerable quantity of serum in both sides of the chest, and nearly half a pint in the pericardium. The pleura pulmonalis and costalis were considerably thickened by lymph.

The pericardium was coated with lymph; the heart was very large, the left ventricle very thick, its cavity capacious; the lining of the auricles and ventricles highly inflamed. On the *carneæ columnæ*, and *chordæ tendineæ*, near the origin of the pulmonary artery, there were a great number of excrescences, like *verruçæ*. The valves of the pulmonary artery were likewise covered with small vegetations, which must have impeded the flow of blood through the vessel. The mitral valve, and the semilunar valves of the aorta were quite healthy.

All the abdominal viscera were normal.

If active treatment had been employed at an early stage of the disease, the life of the patient might probably have been saved.

The preparation of the heart is in the Museum of the Royal College of Surgeons.

746 Lung, rendered solid by sero-purulent infiltration.

747 A portion of lung, hepatised, the effects of active inflammation of the cellular septa; the pleura pulmonalis thickened by coagulable lymph. The lungs minutely injected.

748 Two portions of lung, and a part of the pleura costalis. The lungs consolidated by active inflammation, the pleuræ highly inflamed. The morbid parts having been preserved in alcohol, the inflammatory appearances are beautifully shown.

749 A portion of lung, consolidated by inflammation, and effusion of lymph.

From a child, 6 years of age, who died during the eruptive stage of measles.

- 750 A portion of lung, rendered nearly solid by seropurulent infiltration. The pleura pulmonalis, is in parts, converted into firm cartilage, and there are a great number of different sized dense tumors on this part of the cartilaginous structure, resembling small pearls.

There was water in both sides of the chest ; the patient was an old woman

- 751 A portion of lung, in some parts consolidated by tubercles, and condensed cellular tissue, and in other parts gangrenous. The pleuræ thickened by lymph, and there are long adhesions between them ; these are shown in the preparation.

- 752 A portion of lung, showing the incipient stage of mortification.

The lungs and internal surface of the bronchial tubes were greatly inflamed, and loaded with pus. This patient had a diseased knee-joint.

- 753 Heart and bronchial glands of a boy, about 8 years of age, who died of hydrocephalus acutus. There were several chalky concretions in the lungs, and some of the bronchial glands contained the same kind of matter.

The boy was born deaf and dumb, and was an idiot.

The brain is in the Museum of the Royal College of Surgeons.

- 754 Lung, showing calcareous concretions of considerable size, near its surface. Similar depositions are frequently found in the bronchial glands.

The lung is affected with melanosis.

The history and dissection of this case are detailed in the section on Morbid Uteri.

- 755 A portion of lung, with calcareous concretions. DR. BAILLIE, in his Work on Morbid Anatomy, says, " This is a rare appearance."

- 756 Lung, consolidated by small, aggregated, miliary tubercles, and condensed cellular tissue ; the pleuræ immensely thickened by organised lymph. The mesenteric glands were converted into caseous matter ; the glandulæ aggregatæ of the ileum were enlarged, and some of them were ulcerated.

From a patient 25 years of age.

- 757 Lungs of a girl about 14 years of age.
The structure of the lungs is consolidated by congenital, aggregated, miliary tubercles, and lymph, and there is the cyst of an immense vomica, or excavation, which is seen in the preparation. The internal part of the sac presents all the characters of a secreting surface, similar to the cyst of a large psoas abscess, and one of the bronchial tubes opens into it. A thick adventitious membrane is formed on the pleura pulmonalis.
- The mesenteric glands, and the glandulæ aggregatæ of the ileum were affected with scrofula. This is a splendid specimen.
- I never saw so large a vomica in a young subject
History of the case not known.
- 758 Lungs, trachea, œsophagus, phrenic nerves, &c.
A child, 2 years of age, had been affected with cynanche trachealis for nearly seven weeks. The paroxysms of coughing were so frequent and violent, as occasionally to threaten suffocation; there was purulent expectoration, convulsions came on, and the child died suddenly.
- Inspectio. The lungs on both sides of the chest were thickly studded with small miliary tubercles, and there were several large abscesses, which are shown in the preparation. The bronchial glands were converted into scrofulous tumors, as were the thoracic, and the concatenated glands in the neck on both sides. The liver was large and pale-colored; the gall-bladder distended with viscid secretion; the spleen very large, but not diseased; the mesenteric glands caseous; and the glandulæ aggregatæ in the ileum enlarged.
- I have noticed that when whooping-cough attacks patients with scrofulous tubercles in the lungs, they generally die.
- 759 A portion of lung, showing active inflammation of the cellular structure, and consolidation by the deposition of lymph, miliary tubercles, and medullary tubera. From a boy, 8 years of age, who had been in a delicate state of health, from his birth; he was during the last six months of his life affected with symptoms denoting pulmonic disease. About six weeks previous to his death, he complained of pain

in the head, and was occasionally seized with convulsions, which were often very violent; symptoms of hydrocephalus ensued, the pupils became dilated, and vision was imperfect.

The membranes of the brain were highly inflamed, and there was a considerable quantity of water in the arachnoid cavity.

The substance of the brain was highly inflamed, and on separating the two hemispheres, a considerable quantity of water escaped from the lateral ventricles; the fluid measured six ounces. The commissura mollis had been destroyed by the pressure of the water; and the third and fourth ventricles contained a considerable quantity of fluid. In consequence of this pressure, the infundibulum interfered with the function of the optic nerves, and produced the amaurosis. Similar appearances I have often seen in inspecting the brains of those who had died of hydrocephalus.

The spleen contained medullary tubercles. The mother of this boy had all the symptoms denoting scrofula.

I have no doubt that the tubercles, and the malignant tumors were of congenital origin.

A portion of the diaphragm is preserved in the preparation; the serous membrane inflamed, and slightly covered with lymph.

760 Lung nearly filled with miliary tubercles.

The heart is preserved in this specimen.

A boy, 12 years of age, who had been very delicate from birth, was attacked with cynanche trachealis, the symptoms were very violent, although active treatment had been employed. He suffered distressing dyspnœa, and frequent convulsive fits, and died on the tenth day from the commencement of the disease.

The pleuræ were highly inflamed, the lungs nearly filled with minute scrofulous tubercles, and in some parts hepatised. The bronchial tubes, trachea, and larynx, were inflamed.

The bronchial glands were converted into large masses of matter, not caseous but resembling medullary sarcoma, which compressed the bronchi, and lessened their caliber. The pericardium was inflamed, as was the

internal surface of the auricles and ventricles, and the internal coat of the aorta, and pulmonary artery; the muscular structure showed all the signs of carditis. These appearances are preserved in the preparation. The valves were all healthy, excepting those of the pulmonary artery, upon the edges of two of which lymph had been deposited, which had become organised, and there was a small tumor in one of the pulmonary veins, similar to those in the bronchial glands, which adhered firmly. The tubercles are distinctly seen beneath the pleura; the mother was of a strumous diathesis.

There were scrofulous tubercles in the liver; all the other abdominal viscera were healthy.

The preparation shows the existence of congenital tubercles, and I have several specimens from still-born infants, whose parents have died of phthisis pulmonalis.

761 Miliary tubercles, situated at the extremities of the minute arteries. By macerating the lung till it was quite putrid, and afterwards carefully separating the pulmonary artery and its ramifications, I found the tubercles firmly attached to the terminations of this artery; which I look upon as a proof of their having been formed by these vessels. I have also injected, with size and vermillion, lungs similarly affected, to illustrate this fact. I showed the preparations to DR. ARMSTRONG, many years prior to the publication of his *Work on Morbid Anatomy*, and he acknowledged, that he had never before seen such specimens. In his preliminary remarks on *Morbid Anatomy*, there is a note, describing the mode of preparing such specimens.

762 A portion of lung of a still-born infant, beautifully injected with size and vermillion.

Small miliary tubercles are seen in the preparation, which are not colored by the injection. The lungs, liver, and spleen were studded with tubercles. The mother died two months after the birth of the child.

763 A portion of lung, consolidated by small tubercles, and effused coagulated blood; preserved in alcohol.

The patient, a man 30 years of age, had been afflicted with a pulmonary affection, accompanied with occasional attacks of hæmoptysis; he died suddenly.

- The lungs on both sides of the chest were nearly filled with miliary tubercles.
- In one of the lobes of the right lung, there was a large excavation.
- 764 Two portions of lung, showing aggregated miliary tubercles, vomicae, &c.
- The pleuræ in both sides of the chest adhered firmly by organised lymph.
- The lungs were nearly consolidated by coagulated lymph and very minute miliary tubercles, and there were several large vomicae which are shown in the preparation. The internal lining of those excavations presented the appearance of a secreting surface; several of the bronchial tubes open into the sac, two of them are distinguished by pieces of colored glass.
- The mesenteric glands, and the mucous glands of the small intestines were diseased.
- 765 A portion of lung, rendered solid by scrofulous tubercles, and sero-purulent infiltration.
- The pleura costalis and pulmonalis adhered so firmly, that it was impossible to separate them, except by dissection.
- Portions of two of the ribs are shown in the preparation.
- The patient was very old.
- History not known.
- 766 A portion of lung, rendered nearly solid by scrofulous tubercles. An abscess, at some remote period, had formed in the lung near its external surface, and a portion of the pleura had been destroyed. The boundaries of the abscess had contracted, and there is a decided sign of a complete cicatrix.
- The lung, in some degree, resembles one affected with melanosis, this discoloration, I believe, had been produced by the person having lived all her life in London. The patient was 70 years of age.
- 767 Lung, the natural structure nearly destroyed by scrofulous tubercles, inflammation, and vomicae; the pleura covered with coagulable lymph.
- 768 Lung, showing consolidation of its structure by various sized scrofulous tubercles, &c. There is also a large vomica near the surface of the lung, which communicates with the bronchial tubes, as is seen in the preparation, the trachea having been filled with injection. The pleuræ greatly thickened.

- 769 A portion of lung, showing scrofulous tubercles, and an enlarged state of the air cells, &c. the pleura pulmonalis at its under surface slightly thickened by the production of aggregated tubercles, as seen in the preparation. The lungs on both sides were similarly affected; some of the enlarged air-cells were filled with blood.

The history of the case not known

- 770 Two portions of lung rendered quite solid by scrofulous tubercles, and inflammation of the cellular tissue; the pleura thickened by coagulable lymph. The lungs on both sides of the chest were similarly affected, and the pleuræ were thickened, and adhered firmly. The liver was large and granulated, and the substance of the kidneys nearly filled with serous cysts. See the Section on Diseased Kidnies.

The patient, a drayman, 45 years of age, had been affected with pulmonic disease for several months; he was knocked down by a horse, and expired a few hours after the accident. It appears quite surprising that he should have existed so long with such extensive disease in the lungs, &c.

- 771 Diseased lung and ribs, the effects of inflammation and ulceration. The heart is also shown.

A child, 6 years of age, who from birth evinced all the symptoms of scrofula, became affected with phthisis pulmonalis about two years previous to its death. An abscess formed on the left side of the chest, near the cartilages of the 5th and 6th ribs, which burst externally, and continued to discharge for nearly two months; the ribs became carious.

The lungs on the right side were nearly filled with scrofulous tubercles, and vomicæ.

On the left side the pleuræ were excessively thickened by coagulable lymph, and the adhesion between them was very firm, particularly near the boundary of an abscess in the lung. A portion of the pleura pulmonalis and costalis, also the intercostal muscles, &c. between two of the ribs had been absorbed; which had allowed the matter in the lung to escape beneath the integuments. One of the lobes was in a state of suppuration, and there was a large collection of pus in the thorax, which compressed the other lobe considerably, it was coated with

lymph, and adhered firmly to the external surface of the pericardium. The absorbent glands in the chest, abdomen, and pelvis, were converted into caseous matter; as were also the mesenteric glands. There were scrofulous tubercles in the liver and spleen, and the mucous glands in the small intestines were enlarged.

- 772 Two sections of lung from different subjects. The upper portion shows great thickening of the pleura, and the structure of the lung is consolidated by inflammation, and scrofulous tubercles; the lower specimen is partly condensed by organised lymph, and aggregated tubercles, and there are several large calcareous concretions in the substance of the lung, similar to those occasionally seen in the bronchial and mesenteric glands.
- 773 Lung nearly filled with large scrofulous tubercles, some of them aggregated into large masses; there were also the same morbid appearances in the liver.
- 774 Scrofulous tubercles in the lung, liver, and spleen. A child, 6 years of age, had shown signs of scrofula from its birth; it was extremely delicate and emaciated, the abdomen tumid, and the bowels mostly disordered; it was also distressed with cough and difficulty of breathing. The head was large, the anterior fontanel extremely wide, and the mental powers very defective. About two months prior to the death of the child, there were all the symptoms of phthisis pulmonalis, which were succeeded by those of hydrocephalus.

Inspectio. The arachnoid membrane was greatly thickened, and there was a considerable quantity of water between its layers; the convolutions were flattened, the substance of the brain highly inflamed and softened; and there was nearly a pint of fluid in the ventricles. The mother was of a strumous diathesis.

- 775 Lung affected with scrofulous tumors of large size. History of the case not known.
- 776 Trachea, bronchial glands, and heart of a child 2 years of age. The child had all the symptoms of disease of the lungs, and mesenteric glands.

Inspectio. The lungs were filled with scrofulous tubercles and abscesses ; the bronchial glands formed large scrofulous masses, which are shown in the preparation. The heart was natural in structure, but the foramen ovale was not completely closed. The peritoneum was inflamed, and covered with coagulable lymph, and the mesenteric glands affected with scrofula.

The liver and spleen were very large, and contained a great number of tubercles.

- 777 Lungs, bronchial glands, and glandulæ concatenatæ, greatly enlarged by scrofula.

The heart, œsophagus and trachea, and a portion of the phrenic nerve are shown in the preparation, the latter is impacted between the morbid bronchial glands.

The lungs were nearly filled with scrofulous tubercles, and in several parts small vomicæ were seen. The liver, mesenteric glands, and the mucous glands in the ilium were affected with scrofula.

The patient, a boy 12 years of age, had been in a very delicate state of health ever since his birth.

- 778 The trachea, lungs, bronchial glands, and heart of a child, 8 months old. From its birth, symptoms of pulmonic disease existed ; the mother was of a strumous diathesis.

The natural structure of the lungs is partly consolidated with aggregated tubercles, and there are several vomicæ. The bronchial glands, and the glandulæ concatenatæ are affected with scrofula.

It is quite surprising how life could have been carried on so long, with so many important organs affected.

- 779 A portion of lung, consolidated by scrofulous tubercles ; there are likewise vomicæ. Several of the bronchial tubes open into the cysts, black bristles show the foramina.

Inspectio. The pleuræ on both sides of the chest adhered firmly ; the lungs were nearly filled with very large scrofulous tubercles, some portions of them being solid, and others ulcerated. The liver affected with scrofulous tubercles of different sizes. The spleen was consolidated by miliary tubercles and coagulable lymph, and its capsule thickly coated with the same.

Most of the mesenteric glands were converted into caseous substances, as were also some of the lumbar

and iliac glands, and scrofulous tubercles existed in the pancreas, a viscus rarely affected with disease.

- 780 A portion of lung, from a patient who died of phthisis pulmonalis. Some of the branches of the pulmonary artery are obliterated by coagulated lymph.

In consumptive patients affected with vomica, nature adopts various means of preventing ulceration of the branches of the pulmonary artery. When the vessels are insulated in a vomica, the external coat receives a covering of lymph, and is thus protected from the effects of ulceration. I have several preparations to show this fact in the lungs, also a specimen where the femoral artery and vein in the groin had been insulated by cancerous ulceration; the coats of the vessels were thickly coated with organised lymph, and the whole of the penis was destroyed.

The description of these morbid specimens will be given in the Section on the Diseases of the Genital Organs.

- 781 A portion of lung; its structure destroyed by scrofulous abscesses; the pleura greatly thickened by organised lymph; fistulous openings in the pleura, &c.

The patient, a girl 14 years of age, of a strumous diathesis, during the last two years of her life had been affected with cough, dyspnœa, copious expectoration, and occasional attacks of hæmoptysis; she was greatly emaciated.

On examining the chest, I discovered a considerable enlargement on the right side, between the fourth and fifth ribs, which I imagined to be produced by pus which had escaped from the lung. As the patient complained of excessive pain in the chest, and the difficulty in breathing was so distressing, and the expectoration had ceased; I thought it prudent to make an opening into the chest, to afford temporary relief, when an immense quantity of pus escaped which smelt offensively. This afforded great relief, the hectic symptoms subsided, and pus continued to flow from the aperture for a considerable length of time; it closed however gradually. After this the hectic symptoms recurred, accompanied with diarrhœa, which caused death.

Inspectio. On the right side of the chest the pleura pulmonalis and costalis adhered very firmly; the

lungs were nearly filled with large excavations, and there were a great number of scrofulous tubercles: in one of the lobes of the lung an abscess had formed, which by progressive absorption had destroyed several portions of the pleuræ, and intercostal muscles, and caused the external tumefaction. The sinuses are shown in the specimen.

The lung on the left side was nearly filled with miliary tubercles. The liver was of immense size, and of a deep yellow color; its substance was very soft, but there were no signs of tubercles.

The mesenteric glands were converted into caseous matter, and the mucous glands in the small intestines enlarged.

I have performed this operation in two other cases, both of which terminated favorably, the lungs not having been so extensively affected as in the case last described.

782 An abscess in the lung, the blood-vessels insulated, and their coats covered with coagulable lymph, which had prevented their becoming ulcerated. This fact I have frequently noticed in large vomicæ, also in the groin where the arteries and veins had been insulated by malignant disease, &c.

783 A portion of lung, and liver, showing the effects of inflammation of the peritoneal covering of the diaphragm, and that portion reflected over the convex surface of the great lobe of the liver. An abscess had formed between these membranes, which was bounded by adhesive inflammation, and from the effects of ulcerative absorption, an opening of communication had been established between the abscess and one of the lobes of the lung on the right side, which adhered to the diaphragm, a portion of the latter having been absorbed. The internal surface of the sac was in a sloughing state.

The lungs on the right side were greatly distended, and were very firm in texture; the pleuræ were firmly united. Upon cutting through the lungs they were found to contain small scrofulous tubercles, and were consolidated by sero-purulent infiltration; this is seen in the preparation.

The lung on the left side was nearly as much diseased as that on the right, and there were several small

abscesses filled with pus, which communicated with the bronchial tubes. The pleuræ were united by lymph.

The heart was small, its structure very soft; the lining membrane and the arteries inflamed, the valves healthy.

The liver was very large, and of a pale-yellow color, but there were no signs of organic disease. The gall-bladder was distended with green-colored bile; the spleen large.

There was a great determination of blood to the mucous coat of the stomach and intestines. The description of the appearances of the stomach and intestines is given in the Section on Diseased Stomachs and Intestines.

A man, 50 years of age, had been afflicted with a severe attack of pneumonia. The dyspnœa was very distressing, accompanied with wheezing, and the expectoration of pus. The principal seat of pain was the right hypochondrium, and pain was felt when slight pressure with the hand was employed on that region.

A short time previous to the death of the patient, he was seized with bilious vomiting, and the expectoration of fœtid pus.

I was requested to inspect the body, by Mr. HANDY, Surgeon; the history of the case, and post-mortem appearances, were published in No. 223, of the first Volume of the *Lancet*.

- 784 A portion of lung, consolidated by scrofulous tubercles, and sero-purulent infiltration; there are two abscesses; the pleura pulmonalis was not affected. The tubercles are rather large. From a man 36 years of age.

The history of the case is not known.

- 785 Lung, injected with size and vermillion.

The lungs were partly consolidated by sero-purulent infiltration, and effusion of lymph; there were a great number of small schirrous tubercles in the lungs, and many of the same character, of various sizes beneath the pleura pulmonalis.

This is a valuable specimen.

The breast was extirpated. The description of the preparation is given in the Section on Diseased Mammæ.

786 A portion of lung, affected with carcinoma. The tubercles are seen in the structure of the lung, and beneath the pleura. The mamma was affected with carcinoma. See the preparation.

787 Lung affected with carcinoma. A woman, 46 years of age, had a cancerous breast removed, the glands in the axilla were not affected, and her health was not impaired, although the disease had existed upwards of three years, and the integuments had begun to ulcerate.

788 Two specimens of lung. The pleura immensely thickened by organised lymph; the structure in some parts consolidated by large scrofulous tubercles, and medullary tubera; in some portions ulcerated. The patient, 50 years of age, a delicate woman, of dark complexion, had been subject to cough, and dyspnœa for nearly twenty years. During the last year of her life the pulmonic affection became more distressing, the expectoration at times profuse; the sputa consisted of pus, with mucus, and occasionally small granules resembling miliary tubercles were noticed. Symptoms denoting organic lesion of the liver came on, attended by slight jaundice, and lastly hectic fever, which caused death.

The pleura pulmonalis and costalis were so firmly united, that it was necessary to remove the lungs by dissection for examination; the adhesions were extremely firm on the serous covering of the diaphragm, as seen in the preparation.

On cutting through the lungs, it appeared that nearly all the normal structure had been destroyed by aggregated tubercles, and tubera of considerable size, resembling a combination of medullary sarcoma and carcinoma, and small blood-vessels passed through the latter deposits, but none were seen in the scrofulous tubercles. The bronchial tubes were filled with pus, the lining membrane was inflamed, and that belonging to the trachea was ulcerated.

The liver was rather small in size, its texture dense, and there were several tumors in it similar to those found in the lungs, only less in size; the gall-bladder contained a small quantity of green-colored secretion; the spleen was small, and rather solid. The glandulæ aggregatæ in the ileum were very large,

the mucous surface in some parts inflamed and sphacelated.

It is astonishing how life could have existed so long, with such extensive disease in the lungs. We do not frequently find malignant disease connected with scrofula, therefore this must be considered as an accidental occurrence.

- 789 Lung, filled with various sized medullary tumors. There were also a number of small products of the same character beneath the pleura, and its edges ; and there is a small portion in one of the bronchial tubes. The patient, 43 years of age, had a malignant tumor in the axilla, which was removed, but the disease recurred, and he died.

The history of this case and dissection, was published in the 8th Volume of the Transactions of the Royal Medico-Chirurgical Society. Several other parts of the body were affected with the same disease.

See the diseased kidney and intestine.

- 790 A portion of lung, showing small medullary tubercles, also hepatisation in some parts, the effects of inflammation. The patient, a man 45 years of age, had shown signs of organic disease in the lungs for many years, and had been attended by several Physicians. The symptoms were distressing cough, dyspnœa, great emaciation.

About six months previous to his death, he complained of violent pain in the region of the kidneys, and voided an immense quantity of urine, as in diabetes; but on examining the urine, it did not contain any saccharine matter, but a great quantity of mucus.

The disease in the kidneys gradually increased, and pus was frequently mixed with the urine, which smelt offensively. The dyspnœa became more distressing, he was ultimately attacked with difficulty in swallowing, followed by colliquative diarrhœa, which caused death.

Inspectio. In the right side of the chest there were two pints of water, in the left one pint; there were also old standing adhesions in the pleuræ.

The lungs contained an immense number of small medullary tubercles, not larger than a pea, and some portions of them were consolidated by inflammation; several of the pulmonary veins were obliterated by the pulpy matter, which adhered firmly.

The internal surface of the bronchial tubes was highly inflamed, also the bronchi, trachea, and larynx; the latter was ulcerated.

The heart was large, parietes of both ventricles thick, cavities capacious. The right auricle greatly dilated with blood, the valves natural. The aorta and pulmonary artery were extremely large, but not diseased. There were no signs of disease in the liver or spleen.

The mucous surface of the intestines was highly inflamed, and the glands in the ileum and cæcum were greatly enlarged, and partly ulcerated. Beneath the serous surface of the intestines, there were seen numerous small tumors, similar to those in the lungs. A tumor of a similar kind, only much larger, was found in the transverse arch of the colon, which had produced ulceration of the muscular coat, and probably would have formed an opening into the cavity of the abdomen, had the patient survived a little longer.

The left kidney was affected with medullary and fungoid matter, and the renal vein and several of its branches were obliterated by the same morbid products. The right kidney was nearly destroyed, as was a portion of its capsule.

The history of this case, and post-mortem appearances, may appear too long, but as I consider this case very valuable, I thought it right to state all the particulars. See the Section on Diseased Kidnies.

791 A portion of lung, with a medullary tubercle. There were several similar tubera in the lungs, also a large tumor of the same character in the urinary bladder. The description is given in the Section on Diseased Bladders.

792 Medullary sarcoma in the lung.

793 Bronchial glands, and a portion of lung converted into medullary sarcoma.

A portion of the trachea and bronchi is shown in the preparation, also the arch of the aorta, pulmonary artery, and the remains of the ductus arteriosus.

The internal coat of the aorta was inflamed, and partly thickened by lymph; small shreds of organised lymph are seen in the preparation, hanging from its surface.

One branch of the pulmonary artery is nearly obliterated

by the pressure occasioned by the diseased bronchial glands.

The lining of the trachea and bronchi highly inflamed.

The lungs were nearly filled with medullary tubercles of various sizes, as was the liver.

The description of the liver is given in the Section on Diseased Livers.

794 Two portions of lung, affected with medullary sarcoma, and melanosis.

795 Lung, affected with medullary sarcoma, the pleura greatly thickened.

796 Lung, affected with medullary sarcoma.

797 Part of the trachea, bronchi, the bronchial glands, and a portion of lung, affected with medullary sarcoma, &c. A man, 45 years of age, had been afflicted with disease in the lungs nearly five years. He appeared greatly emaciated, his breathing was performed with great difficulty, he expectorated profusely a very white-colored mucus, not pus; he had also palpitation of the heart, with a pulse of 120 in a minute.

The adhesions between the pleuræ on both sides of the chest were so complete and firm, as to render the task of removing the thoracic contents extremely difficult. The pleura pulmonalis in some parts was nearly half an inch in thickness, and of a semicartilaginous density. The heart and its vessels, the œsophagus and trachea, seemed surrounded by the diseased lungs.

On making sections of the lungs, they were found filled with medullary and fungoid deposits, in some parts consolidated by what appeared to be miliary tubercles, hardly any of the healthy structure being visible. The internal surface of the pericardium was thickened by lymph, and some of the malignant tumors had made their way into it, near the right auricle of the heart, and the superior cava; part of the right subclavian vein was nearly filled with medullary matter.

The heart was very small, there were several minute medullary tumors beneath its serous covering; the substance of the heart, the linings of its cavities and vessels were inflamed, and medullary matter was deposited between the internal and fibrous coat of the aorta. Lymph had been effused on the

internal surface of this vessel, which had become organised, and long processes of it were seen floating in its cavity. The bronchial glands were converted into large masses of dense matter, resembling carcinoma, which diminished the caliber of the bronchi; and a portion of the phrenic nerve was implicated in the disease; the œsophagus was constricted, and some of the medullary matter had penetrated its cavity. The internal surface of the bronchi and trachea were ulcerated, and the concatenated glands on each side of the neck, were changed into medullary sarcoma. The abdominal viscera natural.

- 798 Medullary sarcoma in the lung, which had caused absorption of the pleura, and allowed the morbid production to protrude into the cavity of the chest; a firm adhesion between this growth and the pleura costalis had been effected.

One of the ribs is shown in the preparation.

The lungs were nearly filled with similar products, and several other viscera were affected.

- 799 Four portions of lung, from the patient last described, showing medullary sarcoma, fungus hæmatodes, carcinoma, and scrofula combined; also one of the bronchial tubes, its internal surface greatly thickened.

- 800 A portion of lung, affected with fungus hæmatodes. In the same bottle there are shown, some of the lumbar absorbent glands converted into fungoid and carcinomatous matter; adhesion had been effected between these morbid productions and a portion of the abdominal aorta, and the disease in time would, by progressive absorption, have protruded into the artery. There were a great number of large medullary and fungoid tubera in the lungs.

These specimens were taken from a man who had a testicle affected with medullary sarcoma, combined with cancer.

The description of the testicle is given in the Section on Morbid Testes.

- 801 A portion of lung, affected with fungus hæmatodes. The tubera are numerous, distinct, and not much larger than peas; many of them are seen in the preparation, beneath the pleura.

A man, 30 years of age, had an immense tumor on the chest, near the axilla, consisting of fungus hæmato-

- des and melanosis ; several other parts of his body were affected with the same disease.
- The history of this case is published in the 3rd Volume of the Royal Medico-Chirurgical Transactions.
- The tumor, and several other preparations from the same subject, are in the Museum of the Royal College of Surgeons.
- 802 Lung, affected with melanosis.
- 803 Lung, affected with melanosis, the pleura greatly thickened. The last two preparations from the same subject.
- The patient, a woman 24 years of age, had a melanoid tumor removed, which caused death.
- On examining the body many other important viscera were found implicated in this dreadful disease.
- LAENNEC says, melanosis is one of the rarest species of cancer. I had frequently seen genuine melanosis, many years before this author's Work was published.
- 804 A portion of lung, showing purpura hæmorrhagica beneath the pleura.
- 805 Two portions of lung, and a section of a kidney, affected with purpura hæmorrhagica, and petechiæ. From a child eight months old. The skin was pretty generally covered with the eruption. I only examined the body after death.
- The serous covering of the lungs was affected with purpura, and the structure hepatised by blood and lymph. The mucous surface of the bronchi and trachea was greatly inflamed, and spotted like the skin.
- The pericardium was affected with petechiæ, as was the serous surface of the abdominal viscera, and the mucous coat of the stomach and intestines showed signs of purpura.
- The aorta was highly inflamed ; the vessels of the brain were very turgid ; the pia mater was inflamed, also affected with petechiæ ; the brain extremely vascular, but there was not more fluid in the ventricles than natural.
- The last two Specimens from the same patient.

Comparative Anatomy.

- 806 Part of the lung of a Monkey, its structure completely

destroyed by minute miliary tubercles and abscesses; the pleura greatly thickened by coagulated lymph, which adhered firmly. The lungs generally presented the same morbid appearances. The liver and spleen were nearly filled with small tubercles; the mesenteric glands, and the mucous glands of the small intestines were affected with the same disease.

Monkeys are as liable to be affected with scrofula as human beings, particularly in this climate.

- 807 Lungs of a monkey, nearly filled with scrofulous tubercles; the bronchial glands were also affected. The liver, spleen, mesenteric and mucous glands of the intestines were in a scrofulous state.
- 808 A portion of lung of a bullock, filled with various sized scrofulous tubercles, some of them very large and contained in cysts; the external surface of the pleura is only slightly thickened. A portion of the serous covering is reflected to afford a view of the aggregated tubercles. Scrofulous tubercles are seldom contained in cysts.
- 809 A portion of the trachea of a very young calf, internal lining minutely injected.
- 810 A part of the tongue, larynx, and thyroid gland of a young calf; the internal lining of the trachea, larynx, and epiglottis, minutely injected; also the thyroid gland.
- 811 Lung of a New Holland Cassowary.
- 812 Tongue, trachea, and bronchi of the Struthio or New Holland Cassowary. The tongue is very small and thin, and there are several processes of different sizes along its edges.
- The rima glottidis is very capacious, and the internal lining at its edges is formed into two large folds. About eight inches from the division of the trachea into the bronchi, the annuli cease to be circular, to the number of seventeen; which allows the internal lining to protrude, and forms an immense sac when filled with air.
- 813 Trachea of a Cassowary, the inferior portion showing the sac cut open. In the first specimen the sac is filled with cotton.
- 814 The inferior part of the trachea of the Crax or Curassow; it is greatly dilated.
- 815 Tongue, larynx, trachea, bronchial tubes, and the

- muscles belonging to the organ of voice of the *Macacus Cynomolgus*.
- 816 Lungs of a Parrot, with scrofulous tubercles ; there is also a large tubercle on the back part of the neck. The trachea and bronchi are shown, likewise the muscles belonging to the bronchial larynx, which are injected.
- 817 Trachea, bronchial larynx, muscles belonging to the organ of voice, the heart and lungs, of a *Psittacus*, or Parrot.
- 818 Lungs of a Mino, with calcareous concretions in them ; which had occasioned absorption of parts of two of the bodies of the dorsal vertebræ.
- 819 Cranium, larynx, bronchial larynx, and the muscles belonging to the organ of voice, of the *Pyrrhula*, or Bull-finch. The testes also shown.
- 820 Lungs of a Canary bird, tuberculated. The muscles of the organ of voice shown.
- 821 A portion of the trachea of the Merganser, or Goosander, showing the dilated state of the annuli.
- 822 Trachea of a Drake ; the bronchial larynx bony.
- 823 Bronchial larynx of a Drake.
- 824 Lungs of a Boa constrictor.
- 825 Trachea and lungs of an Iguana ; the lungs minutely injected.
- 826 Tongue, trachea, and lungs of the Iguana. The tongue is bifid in this reptile, as in snakes.
- 827 Lungs of an Iguana, injected.
- 828 Lungs of a Lizard, distended with spirit.
- 829 Lung of a Tortoise, minutely injected.
- 830 Lung of a Tortoise, minutely injected with size and vermillion ; dried and preserved in spirit of turpentine.
- 831 Lung of a Turtle, dried, and preserved in spirit of turpentine. This is a very beautiful specimen.
- 832 Lung of a very large Turtle ; the air cells shown.
- 833 Lung of a Turtle ; air cells shown.
- 834 Lung of a Turtle, dried ; air cells shown.
- 835 Lung of a very large Turtle, minutely injected with size and vermillion. The air cells, bronchial tubes, and their ramifications shown.
- 836 Lung of a Turtle, injected.
- 837 Lung of a Turtle, minutely injected.
- 838 A portion of the trachea of a large Turtle, with the bronchi.

- 839 Lungs of a Guernsey Toad, inflated, to show the air cells, &c.
- 840 Lungs of a Frog, injected, and inflated, to show the air cells.
- 841 Trachea, and part of the lung of a large Tortoise, minutely injected; the air cells and bronchial tubes shown.
- 842 Head and branchiæ of a small Lucius, or Pike. The gills are minutely injected; there is a small fish in the œsophagus.
- 843 Head and branchiæ of a Conger Eel—*Anguilla*. The gills minutely injected.

SECTION IX.

ORGANS OF DIGESTION.

Tongue and Pharynx.—Human Anatomy.

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- 844 Tongue; the papillæ and the foramen cæcum shown, a bristle is introduced into the latter.
- 845 Tongue, injected.
- 846 A tongue, larynx, and trachea of a fœtus; the thyroid gland minutely injected.
- 847 A tongue; the larynx, &c. shown; also the nerves and thyroid gland.
- 848 Tongue, larynx, pharynx, and the foramen cæcum, thyroid gland, &c. of an adult, showing the healthy structure.
- 849 Tongue, pharynx, larynx, œsophagus, with the nerves, muscles, and thyroid gland of an adult.
- 850 Tongue, pharynx, larynx, and œsophagus of a child; thyroid gland injected.
- 851 The tongue, pharynx, larynx, trachea, œsophagus, sublingual glands, and the thyroid gland, with the internal carotid artery.
- From a man who was attempting to swallow a large piece of beef; this having remained in the larynx, and compressed the epiglottis, and rima glottidis, he was suffocated before professional aid could be obtained.
- 852 Tongue, pharynx, and larynx of a child, 6 years of age, who died during the eruptive stage of rubeola. The lungs were hepatised, the bronchial tubes loaded with pus and mucus; the lining of the pharynx and larynx highly inflamed, and thickly coated with coagulated lymph; these appearances are shown in the preparation.

- 853 Part of a tongue, with the pharynx, larynx, &c. From a man, who it was supposed, died of cynanche maligna. The internal surface of the larynx and trachea was highly inflamed when the parts were first removed; but the color has diminished since they were put into spirit. There was effusion of serum between the cuticular and mucous surfaces covering the epiglottis and rima glottidis, and the edges of the latter were thickened.
- This Specimen shows admirably the following natural parts; the foramen cœcum Morgagni, the tonsils, and the apertures of their excretory ducts.
- It must be admitted that angina maligna is a rare disease.
- 854 Base of the tongue, larynx, &c. from a man who died from the effects of syphilis and mercury. The base of the tongue was extensively ulcerated, and the tonsils destroyed.

Comparative Anatomy.

- 855 Tongue, larynx, and trachea of a Monkey. The aperture at the base of the epiglottis leading to the chordæ vocales, &c. shown.
- 856 Tongue of a Lion, injected; the papillæ, nerves, and arteries are shown.
- 857 Tongue of a Cat; the cuticular prickles, and the papillæ are shown.
- 858 Tongue and larynx of the Ursus Lotor, or Racoon, showing the laryngeal sacculi, &c.
- 859 Tongue of a Puppy, about a month old. The thyroid gland converted into fibrous tumors of great size, which are very vascular. A growth of a similar character, only less in bulk, surrounds the arteria innominata, which caused the death of the animal.
- 860 Tongue, larynx, trachea, and chordæ vocales of a Fox.
- 861 Tongue, pharynx, larynx, and œsophagus of a Seal, injected.
- 862 Tongue of a Phoca, or Seal, with the pharynx, larynx, trachea, &c.
- 863 Tongue, larynx, pharynx, &c. of the Myrmecophaga Aculeata.

- 864 Tongue, larynx, trachea, and bronchial larynx, with the muscles of a Ramphastos, or Toucan. The tongue of this curious bird is very long, thin, and resembles a fine piece of whalebone; it is almost transparent, and the edges present delicate articular filaments, inclined backwards.
- 865 Tongue and head of a Picus Viridis. The curious mechanism of the tongue is shown. The tongue is very short, it is sharp pointed, horny, and its sides partly barbed. The cornua of the os hyoides are very long; they consist of five cartilaginous portions, viz. one single piece, and two pairs.
- 866 Tongue and head of a Wood-pecker, showing the same structure as the last described.
- 867 Tongue, trachea, and lungs of a large Iguana. Tongue short and thick, slightly bifid at its extremity, but in a greater degree at the base; surface villous. The rima glottidis shown.
- 868 Tongue, larynx, trachea, bronchi, and œsophagus of a very large Tortoise, from Calcutta. The shape of the tongue triangular, papillæ long, and very soft; the rima glottidis shown.
- 869 Tongue, larynx, trachea, bronchi, lungs, and heart of the Sirus Marinus. The superior and inferior larynx are beautifully delicate; the annuli long, imperfect, and capacious. The muscular valve of the right ventricle of the heart is shown.

ŒSOPHAGUS.—*Morbid Anatomy.*

- 870 A portion of œsophagus, inverted. The cuticular lining nearly destroyed, from the person having swallowed a great quantity of sulphuric acid; he suffered severe pain, and finding it was not likely to destroy him soon, he made an attempt to cut his throat with a razor; he lost a considerable quantity of blood, became extremely ghastly, and almost insensible, and he died on the third day. The mucous coat of the stomach looked like a sphacelated part, and the villi of the duodenum were affected.

871 Tongue ; the pharynx, larynx, trachea, and bronchi are shown, also the sublingual glands, the nerves, muscles of the tongue, likewise the thyroid gland, the glandulæ concatenatæ of the neck, and the bronchial glands.

Carcinomatous tubercles had formed in the cellular media belonging to the coats of the œsophagus, at the superior and anterior part ; which had progressively produced absorption of the muscular and mucous coats, and had projected into the pharynx, and extended upwards as far as the covering of the rima glottidis, and compressed them considerably : the morbid action had also proceeded some distance along the œsophagus ; these appearances are well displayed in the specimen.

On cutting open the anterior part of the trachea, the internal lining (in a small circle) had been absorbed, and a portion of the thyroid cartilage deprived of its perichondrium, projected through this aperture into the trachea. The bronchial glands, and the glandulæ concatenatæ were converted into carcinomatous and melanoid deposits. The thyroid gland not affected. There were several cancerous tubercles in the lungs.

This is an invaluable preparation.

872 Larynx, pharynx, trachea, and œsophagus. From a woman 50 years of age, who had been suffering for a great length of time from the effects of a stricture in the œsophagus ; various plans of treatment had been employed to relieve her sufferings without effect ; she was greatly emaciated.

A Surgeon attempted to pass a bougie through the strictured part ; considerable force was employed, which occasioned great pain, and the patient seemed half suffocated, and made great efforts to vomit ; she died two days after the attempt was made to pass the bougie.

On examining the morbid parts, the stricture was found to be situated about two inches below the posterior portion of the cricoid cartilage ; it was very narrow, and nearly two inches and a half in length. The disease was cancer, which had commenced in the cellular tissue, between the coats of the œsophagus, and by progressive absorption had made its way

through the muscular and mucous coats, into the tube of the œsophagus, which is shown in the preparation. A little below the superior aperture of the stricture, the posterior part of the œsophagus was lacerated to as far as the inferior opening.

I must confess I do not think it correct practice, to attempt to pass a bougie to cure a stricture of the œsophagus of old standing, where there are evident constitutional signs of malignant disease.

The internal lining of the larynx and trachea were slightly thickened, and near the left bronchus, one of the bronchial glands (which was filled with calcareous concretions) had formed a firm union with the cellular tissue of this tube, and had partly penetrated it.

There were medullary tumors in the lungs, and the uterus was affected with carcinoma.

- 873 Base of the tongue, the pharynx, larynx, trachea, and œsophagus. A woman 56 years of age, who had experienced great difficulty in swallowing for several years; a few months previous to her death she could only swallow fluids in small quantity, and this was effected with the greatest difficulty; she became greatly emaciated, and died of inanition.

There is a stricture in the œsophagus, nearly an inch in length, the constriction only admitting a piece of glass not much larger than a probe, which is shown in the preparation. The stricture is situated nearly at the commencement of the œsophagus; it is formed into cellular tissue, which had caused partial absorption of the muscular and mucous coats in the constricted part. The lungs were affected with medullary sarcoma.

This is another argument against the employment of bougies in these cases; they may perhaps be beneficial in spasmodic stricture, or where the constriction is produced by inflammation of the cellular tissue, and the effusion of lymph; as in strictures of the urethra or rectum.

The last two specimens are practically useful.

STOMACH AND INTESTINES.

STOMACHS.—*Healthy and Morbid.*

- 874 A stomach, minutely injected.

- 875 A portion of stomach ; the mucous coat highly inflamed. From a woman who died of diseased liver, and had hæmatemesis for a considerable time previous to her dissolution.

The liver was large, granulated, and very solid in structure, and its vascularity diminished. The gall-bladder filled with a ropy black fluid. The glands in the intestines greatly enlarged, and there was a considerable quantity of dark-colored fluid in the intestines, mixed with coagulated blood.

The stomach was greatly contracted, and contained coagulated blood, and the greater curve was highly inflamed ; the appearance is well shown in the preparation, which is preserved in alcohol.

- 876 A portion of stomach and duodenum, showing purpura hæmorrhagica beneath the mucous coat.

- 877 A portion of stomach ; the mucous coat inflamed. From a man 50 years of age, who had suffered several severe attacks of pneumonia. About a week previous to his death, he was attacked with bilious vomiting, and expectoration of pus.

Inspectio. There were old adhesions between the pleura pulmonalis and costalis, in both sides of the thorax ; and there were tubercles and vomicæ in the lungs.

The liver was large, of a pale yellow color ; the serous covering of the large lobe adhered firmly to the diaphragm ; an abscess was found between the liver and the diaphragm, and a portion of the latter, to the size of a dollar, was partially absorbed. The mucous coat of the stomach and intestines was inflamed.

See Section on Diseased Livers and Lungs.

- 878 A portion of stomach, with a part of the duodenum. From a man who was a notorious dram-drinker. The mucous surface of the stomach, also the duodenum highly inflamed. which is shown in the preparation, the parts having been preserved in alcohol. He died suddenly of apoplexy.

See the description of the brain in the Section on the Morbid Brain.

- 879 A portion of stomach ; the mucous coat of a deep red color, and partly softened, the effects of colchicum. The patient was a young woman ; it was imagined she had taken half an ounce of the powder.

- 880 Human stomach, inverted. The mucous coat highly inflamed, and ulcerated in many parts; also the duodenum and rectum; the effects of the person having swallowed a large quantity of spirit of turpentine.
- 881 Stomach of a girl 19 years of age, showing the effects of arsenic, which had been swallowed with a view of bringing on abortion. It was imagined that half an ounce of this poisonous substance had been taken; the symptoms were excessive vomiting, with agonizing pain in the stomach, followed by convulsions. The stomach contained a considerable quantity of arsenic, the coats were greatly contracted, the mucous coat appeared greatly thickened, the rugæ very large, and the color very red, as if the vessels were surcharged. There were also several substances in the stomach, which were probably produced by the arsenic acting on the mucus therein contained. Some of the mucous glands near the pylorus were large, and the mucous coat of the duodenum was reddened.
- This is a very remarkable specimen.
- 882 Part of a stomach, showing the effects of sulphuric acid.
- 883 A portion of stomach, showing the effects of oxalic acid. The mucous coat softened, and of a dark color, as in melanosis, and the blood in the vessels tinged in the same manner.
- 884 A portion of stomach; the mucous surface softened and blackened, the effects of oxalic acid.
- 885 Stomach of an infant, inverted. The child was suddenly seized with violent convulsions from teething.
- The superior part of the great end of the stomach was destroyed by the gastric juice, close to the termination of the œsophagus; the other portion was quite healthy.
- “The gastric juice contains a considerable quantity of muriatic acid.”—“Dr. PROUT.”
- In DR. ARMSTRONG’S Work on Morbid Anatomy, there is a plate resembling this preparation, from a child nine months old.
- 886 Human stomach, inverted:—the principal part of the great arch destroyed by the chemical action of the gastric juice, the remaining part of the stomach and duodenum unaffected. The coats of the stomach

resemble those of a bladder in a putrid state from maceration.

- 887 A portion of the stomach of an adult, showing the effects of the gastric juice on the coats.
- 888 A portion of human stomach, the coats affected by the gastric juice.
- 889 The inferior portion of a stomach, with a part of the duodenum. There is an ulcerated aperture of about the circumference of a dollar, nearly an inch and a half from the pylorus ; adhesion had taken place between this part and the peritoneal surface of the under part of the liver, which by the efforts of vomiting had separated ; this allowed the contents of the stomach to pass into the abdomen, and caused the death of the patient.
- 890 Stomach affected with carcinoma. A man 60 years of age ; the liver was also partly filled with carcinomatous tubercles ; spleen large.
The mucous coat greatly thickened, and partially ulcerated, and the cardiac orifice constricted ; the cancerous tumors were very large, and situated between the serous and muscular coats ; these are shown in the preparation.
- 891 The inferior portion of a stomach, with part of the duodenum.
Nearly the whole of the small curvature of the stomach was destroyed by various sized carcinomatous tumors, as was the mucous surface, by ulceration ; the pylorus greatly thickened, and its opening constricted.
The serous coat extremely dense ; several of the tubercles are seen beneath it, and a mass of omentum adheres to it firmly. Several cancerous tubercles were seen in the omentum (some of them are shown in the preparation), also in the liver.
It appears astonishing how a person could have existed so long with such a diseased stomach.
The patient was a woman, 59 years of age, who had been disordered in health for four years.
- 892 Stomach affected with carcinoma.
- 893 Stomach affected with carcinoma.
Nearly the whole of the mucous coat destroyed by ulceration ; in one portion the mucous glands are shown in the preparation.
The peritoneal coat very dense. The disease appeared

to commence in the cellular tissue of the different tunics, near the cardiac orifice of the stomach. The tumors are very large in this situation, as is shown in the preparation. The liver was affected with the same disease.

This is a splendid specimen.

- 894 Stomach affected with carcinoma and fungus hæmatodes, with a portion of the transverse arch of the colon. The peritoneum showed the effects of chronic inflammation, there were firm adhesions between the under surface of the great lobe of the liver, the small curve of the stomach, and the transverse arch of the colon. The liver was large and tuberculated, as is noticed in dram-drinkers ; the spleen large.

There were a great number of schirrous tubercles in the omentum, and the principal parts of the small curve of the stomach and the pylorus were affected with carcinoma.

The cancerous growths seemed to have commenced in the cellular tissue between the serous and muscular coats, and had proceeded inwards, destroying a considerable portion of the muscular and mucous coats (as seen in the specimen); and, had the patient lived a few days longer, the peritoneal coat would have sloughed. The mucous glands of the ileum and cæcum were greatly enlarged.

A man 60 years of age, had suffered from stomachic disease for nearly three years, which had reduced his constitutional powers, and he was greatly emaciated. Six months previous to his death, he was tormented with vomiting, and jaundice came on. The pulsations of the aorta were distinctly felt, as if that vessel were in an aneurismal state.

- 895 A portion of a stomach, and part of the duodenum. Small carcinomatous tubercles had formed between the coats of the stomach close to the pylorus, which had destroyed by ulceration the mucous surface, and produced a small opening, which is shown in the preparation by a black bristle. The pylorus was also affected with the same disease ; it is greatly thickened, and its orifice diminished. The liver affected with carcinoma.

From a woman, who had for a length of time suffered from hepatic and stomachic disease. Her abdomen

became gradually enlarged ; and she was frequently very sick, and complained of great pain in the epigastric region, and the bowels were constipated ; symptoms denoting peritonitis supervened, which caused the death of the patient.

On inspection it was found, that some of the contents of the stomach had escaped through the ulcerated opening into the cavity of the abdomen ; the peritoneum and all its reflections were highly inflamed.

896 The inferior part of a stomach affected with carcinoma; the pancreas shown.

The aperture of the pylorus is greatly constricted by the growth of carcinomatous tubercles between its coats ; there is an ulcerated opening through all the tunics, to about the extent of half a crown, near the pylorus : the edges appear to have healed, and had united to the peritoneal coat of the pancreas, which had prevented the contents of the stomach from escaping into the abdomen. The lesion is shown in the preparation by the separation by dissection of a portion of the united parts ; at about an inch and a half from the opening near the pylorus, there is another ulcer, about the size of a sixpence, the edges well defined ; this only destroyed the mucous and muscular coats, but in a short time the serous coat would have been absorbed.

There were several cancerous tubercles on the peritoneal covering of the stomach, and pancreas ; the latter was healthy ; there were also a number of cancerous tumors in the liver.

A woman, 59 years of age, had been for nearly two years afflicted with stomachic affection, accompanied with symptoms denoting a diseased liver. Several months previous to her death she could scarcely keep anything in her stomach, and the bowels were generally costive.

897 A portion of stomach, and a medullary tumor in the liver. A man, 50 years of age, a Baker, had for several years been subject to a disordered state of the stomach and intestines.

For nearly a year and a half previous to his death his health declined, he complained of a pain and burning heat in his stomach, and sour eructations, and it was with great difficulty he could retain any thing in his stomach : he became greatly emaciated, and died.

The liver was immensely large, there were a great number of medullary tubera beneath its serous surface, some of them extremely large, and the arteries near the morbid parts were very numerous and meandering. In the centre of several of these tumors, the peritoneal coat was semicartilaginous and indented, an appearance frequently noticed where the disease has long existed.

The substance of the liver contained a great number of medullary tumors, and the gall-bladder was greatly distended with thick black secretion.

Nearly the whole of the small arch of the stomach was affected with various sized medullary tumors, situated between the different coats, and they were all greatly thickened, particularly the mucous and serous coats, and the tumors were seen beneath them, which appearances are shown in the preparation. Most of the mucous glands of the ileum and cæcum were greatly enlarged.

The lungs were loaded with mucus tinged with blood, and the lining of the whole respiratory organs was highly inflamed, and the tubes filled with mucus. The heart normal.

In consequence of the thinness of the abdominal parietes in this patient, the tumors could be distinctly felt, which rendered the diagnosis very clear during life.

- 898 Pyloric extremity of the stomach, with a portion of duodenum, showing an ulcerated opening in the former; the pancreas and a part of the liver are preserved. From a woman 39 years of age, who was a cook, and had lived freely.

For nearly two years she had symptoms denoting organic disease of the stomach, and could scarcely retain any thing in it; she had consulted several medical gentlemen; the disease ultimately subsided, and her health improved.

The evening previous to her death was spent in company with a male acquaintance; she returned to her situation very late, inebriated. The following morning she was attacked with violent pain in the abdomen, succeeded by bilious vomiting. These symptoms were not subdued by the usual remedies, and the bowels could not be acted upon by the most

active purgatives or clysters ; the abdomen became greatly distended with air and fluid, accompanied with great tenderness. Stercoracious vomiting supervened, as in internal strangulated hernia ; she gradually sank, and died 24 hours from the commencement of the attack.

Inspectio. There was an immense accumulation of fluid and air in the cavity of the abdomen, the former appeared like the gruel the patient had taken, and smelt of the medicine which had been given.

The peritoneum and all its reflections were highly inflamed. The stomach and intestines were empty, except the upper part of the rectum, where there were hardened scybalæ.

The liver was large and granulated, the serous covering thickly covered with organised lymph, which adhered firmly ; the substance granulated, and there were a few calculi in the gall-bladder. The external part of the small arch of the stomach adhered firmly to the under surface of the great lobe of the liver.

The uterine organs were in a high state of vascularity. In the cavity there was a gelatinous substance, and the same was found in the angle of the uterus, and in the ovarium of this side there were all the signs of a recent corpus luteum. The internal surface of the stomach was highly vascular, and the mucous and muscular coats had been, at some remote period, partially destroyed by ulceration ; the edges of the healthy mucous coat surrounding the portions which had been removed, showed all the appearance of cicatrization having been effected. But in one of the ulcerated openings, which was about the circle of a sixpence, the serous coat seemed to have been slightly absorbed, and from inflammation of the serous surface of the stomach, and that belonging to the liver having been excited, and lymph effused, a union had been effected between them, which prevented the contents of the stomach passing through the opening into the cavity of the abdomen.

The separation of the union which had taken place between the diseased portion of the stomach and the serous surface of the liver, had, I have no doubt, been occasioned by the violent vomiting.

Was the vomiting caused by drinking ardent spirit, or from having taken poison ?

SMALL INTESTINES.—*Healthy and Morbid.*

- 899 A portion of the pylorus, with part of the duodenum and pancreas. The valvulæ conniventes greatly developed; they commenced much nearer the pylorus than usual.
- 900 A portion of duodenum, inverted; the valvulæ conniventes remarkably large, the villi shown, the mucous surface thickened.
- 901 Duodenum of a fœtus, injected.
- 902 The cardiac orifice of the stomach, with a part of the duodenum and pancreas; the hepatic and pancreatic ducts shown. The cardiac orifice thickened by depositions of lymph between the coats; the mucous coat, and the surface of the duodenum are also affected.
- 903 Stomach, spleen, pancreas, and a portion of the duodenum of a child. It was born at the eighth month; and was well developed for its age.
- About the second day from its birth it became jaundiced; it sucked scantily, but did not retain the milk in its stomach long; the discharge of meconium was copious. On the fourth day of its life it began to vomit a dark-colored fluid, of the consistence of mucus, and took the breast reluctantly. In this way it lived till the eleventh day, vomiting a dark-colored fluid, like coffee grounds, and its evacuations were of a dark color, scanty in quantity, and few in number.
- The stomach was greatly distended with a colored fluid, which seemed to be a morbid secretion from the mucous surface; this coat was of a blackish color, as in melæna.
- The pylorus was widely dilated, and from this part, the duodenum was distended into a large pouch, to as far as where the ductus communis choledochus, and the pancreatic duct enter, and here the bowel was found completely impervious, as seen in the preparation. The gall-bladder was empty and all the biliary ducts impervious; the small and large intestines were much contracted and empty; all the other viscera healthy.
- This is a very singular mal-formation, and from the biliary ducts being impervious, it proves satisfactorily that bile does not produce the dark matter found

in the large intestines of the fœtus, which is called meconium; it must therefore be secreted by the minute arteries belonging to these intestines.

I am the more inclined to form this opinion from having found meconium in the bowels of a mal-formed lamb, where there were no signs of a liver.

904 A portion of duodenum of a young man, who was thrown from his horse against a turnpike-gate, and shattered the right os ilium to pieces, and ruptured a portion of the intestinum ileum to the extent of an inch. In consequence of the arterial blood having been effused between the cellular tissue, all the coats of the bowel appear in the preparation highly inflamed. The poor fellow lived 24 hours after the accident.

905 A portion of duodenum; all the coats highly inflamed, more especially the mucous surface; some parts ulcerated, and lymph deposited. From a man of a plethoric habit.

The liver was inflamed, also the whole of the intestines, and there was a considerable quantity of coagulated blood in the intestines.

The patient had intestinal hæmorrhage for several days previous to his dissolution.

Preserved in alcohol.

Observations. On inspecting the bodies of those who died of typhus fever in the incipient stage, or from gout, acute rheumatism, purpura hæmorrhagica, dropsy from plethora, or any active disease, I always examined carefully the state of the main arteries, and generally found them in an inflamed condition; that is, the internal coat was of a bright red color, and the vasa vasorum very apparent, and greatly enlarged. Some pathologists however imagine that the color of the internal coat is occasioned by the transudation of the blood into the tissue of the arteries after death.

In purpura hæmorrhagica occasioned by plethora, in patients free from organic disease in the liver, or any other important viscus, I have put a stop to the disease by bleeding, purgatives, and digitalis, and in all the cases the blood was as highly buffed and cupped as in peritonitis or enteritis. But when this disease was caused by some lesion of the liver, or any other vital organ, or from the want of constitu-

tional power, I adopted a different plan of treatment, such as tonics, with acids, &c. This was not in all cases successful; some died of ascites, hydrothorax, or from exhaustion.

In acute dropsy, in young persons of a plethoric diathesis, and without any signs of visceral disease; the disorder was cured by bleeding, diuretics, and purgatives; and in all these cases the blood was highly inflamed.

I do not pretend to affirm that this mode of treatment is novel; I was led to adopt it from having noticed the morbid state of the arteries, which I have briefly stated in the history of the cases, which enhances the value of the preparations on this subject.

- 906. A portion of duodenum; all the coats greatly inflamed. This was a case of enteritis, the peritoneum was also inflamed.
- 907 A portion of duodenum, inverted, showing the incipient stage of inflammation, particularly at the edges of the valvulæ conniventes.
- 908 A portion of duodenum; all the coats greatly thickened by chronic inflammation.
- 909 A portion of duodenum; the mucous coat thickened by pus and lymph deposited between this coat and the muscular tunic; the valvulæ conniventes hypertrophied.
- 910 Commencement of the duodenum. The internal surface thickened by lymph, deposited between it and the muscular coat; the valvulæ conniventes very small.
- 911 A portion of duodenum, showing the effects of inflammation; the edges of the valvulæ conniventes greatly thickened, and firmly united.
From a man, who had several parts of his body affected with fungus hæmatodes and melanosis.
The history of this case is published in the 3rd Volume of the Transactions of the Royal Medico-Chirurgical Society.
- 912 A portion of the ileum and cæcum, and the appendix. The mucous coat greatly thickened, and formed into rugæ, resembling a contracted stomach, and there were also a great number of miliary looking growths, similar to those in the duodenum and ileum.

A girl, 13 years of age, had been in a delicate state of health from her birth. About a year and a half previous to her death symptoms of *tabes mesenterica* came on ; she had a sallow countenance, her digestive organs were disordered, and she was greatly emaciated ; diarrhœa and intestinal hæmorrhage supervened about four days previous to the death of the patient.

There were about three pints of water in the abdomen, all the viscera seemed exsanguine. The liver was large, of a pale white color, texture very soft, and there were a great number of miliary tubercles in its substance ; gall-bladder filled with bile.

The spleen large and firm, and there were several small tubercles in it.

The mesenteric glands considerably enlarged, they were very firm in texture, but did not contain that caseous secretion generally noticed in *scrofula*.

The mucous coat of all the intestines very vascular, but ulceration had not taken place even where the mucous glands were so much enlarged. There were several tubercles in the lungs, but they had not affected the function of these organs.

The last three preparations from the same subject.

913 A portion of duodenum of an adult, with part of the pancreas. The man had a diseased liver ; there was a considerable quantity of water in the abdomen, the peritoneum and all its reflections were inflamed, the mucous coat of the small intestines highly vascular, and slightly thickened, and there were a great number of projections on the sides and edges of the *valvulæ conniventes*.

On examining these singular productions with a magnifying glass, they appeared to have been produced, not by the disease (*scrofula*), but by an imperfection of the *valvulæ conniventes*, perhaps congenital.

914 Duodenum, the mucous glands enlarged, some in a sloughy state.

915 Duodenum inverted, the mucous glands greatly enlarged, surface partly ulcerated.

916 Duodenum, injected with size and vermillion, with scrofulous tubercles beneath the serous coat. From an adult—the lungs filled with scrofulous tubercles and vomicæ ; the mesenteric glands affected with the same disease.

- 917 Duodenum, minutely injected; the valvulæ conniventes extremely large, the serous coat greatly thickened by chronic inflammation, and there are scrofulous tubercles beneath it, which are small, and very numerous. The patient died of phthisis pulmonalis.
The lungs were filled with tubercles and vomicæ; the mesenteric glands diseased.
- 918 Duodenum, injected with size and vermillion; two of the mesenteric glands converted into bone.
From a man, who died of phthisis pulmonalis; the lungs were nearly filled with tubercles and vomicæ, the mesenteric glands scrofulous, as were all the mucous glands in the intestines.
- 919 Duodenum, injected; the mucous coat inflamed, and in one portion there is a large opening by ulceration of all the coats, occasioned by carcinomatous tubercles between the tunics; it is shown in the preparation; the liver and the mesentery were affected with carcinoma.
- 920 A portion of duodenum, affected with medullary sarcoma, which had formed between the coats, and had in several parts destroyed the mucous surface, producing a ragged appearance; as seen in the preparation. A piece of omentum adheres firmly to the serous coat.
The intestinum ileum, the mesentery, and lungs, were affected with the same disease.
- 921 Portions of the duodenum and jejunum, minutely injected and dried; the valvulæ conniventes shown.
- 922 A portion of duodenum and jejunum, injected with size and vermillion; the coats were highly inflamed, ulcerated, and partly in a state of sphacelation. The ulceration had extended in some parts from the mucous coat through the serous, and some of the intestines were contracted, or strictured; the serous coat is thickened by organised lymph.
- 923 A portion of duodenum, with numerous small hydatids on the peritoneal coat.
- 924 A portion of jejunum, some of the veins filled with chyle, dried, and preserved in spirit of turpentine.
I never saw an instance of the kind before.
- 925 Jejunum, injected minutely, inflammatory appearances shown; preserved in spirit of turpentine.
- 926 Intestine inflamed, dried, and preserved in spirit of turpentine.

- 927 Intestine, showing venous plethora, in spirit of turpentine.
- 928 Intestines of a child, minutely injected, inverted, and preserved in spirit of turpentine.
- 929 A part of the jejunum; all the coats greatly thickened by inflammation and coagulated lymph, particularly the mucous surface, and in one portion of the intestine there is an ulcerated opening through all the coats, which is shown in the preparation.
- The last two preparations from the same patient, a woman who died of phthisis pulmonalis.
- 930 A portion of jejunum, the external surface covered with lymph, there are also a great number of serofulous tubercles beneath the serous coat. A female, 50 years of age.
- About a gallon of water in the abdomen, the peritoneum was covered with organised lymph and scrofulous tumors of small size; the intestines were firmly agglutinated. The mesenteric glands were nearly converted into caseous matter, and there were tubercles and vomicæ in the lungs.
- 931 A portion of ileum minutely injected; from a fœtus.
- 932 Ileum of a fœtus, minutely injected.
- 933 A portion of intestine, dried, and preserved in spirit of turpentine.
- 934 Two specimens of diverticulum in the ileum, inflated; the projections long. The glandulæ aggregatæ also shown.
- 935 A portion of ileum, with a small diverticulum; the mucous coat greatly thickened.
- The two last preparations from the same subject. The pancreas was diseased, and there were several fungoid tubera in the liver; the gall-bladder filled with dark colored secretion, and there were several tumors in the mesentery, similar to those in the liver.
- The mucous coat of the urinary bladder presented the same morbid appearance noticed in the mucous coat of the cæcum.
- The description of the morbid parts is given in the Sections on Diseased Pancreas, Liver, Intestines, and Urinary Bladder.
- 936 Ileum with diverticula. There were several similar appearances in the small intestines; the whole of the bowels were greatly distended with air.

- 937 Intestinum ileum, with several volvuli; a portion of the intestine was cut open to show the valvulæ conniventes, and miliary tubercles beneath the mucous coat. The volvuli I have no doubt were formed shortly before death.

A boy, about 7 years of age, had from his birth been in a delicate state of health; when about 5 years old, he was attacked with continued intermittent fever, which ultimately affected his brain. He became emaciated, the abdomen enlarged, and he complained of great pain in the bowels, and in the head near the occiput; the bowels were greatly disordered. These symptoms gradually increased, symptoms of hydrocephalus came on, and his vision was imperfect.

The anterior fontanel was very capacious. The membranes and substance of the brain highly inflamed, the convolutions flattened; nearly twelve ounces of water were found in the ventricles. On cutting into the lobes of the cerebellum, it seemed to possess little remains of its natural structure, having been destroyed by the growth of a scrofulous tumor, which had occasioned an abscess in its centre. There were several miliary tubercles in the lungs, liver, and spleen, and the mesenteric glands were converted into large scrofulous masses; there were a great number of miliary tubercles beneath the mucous coat of the small and large intestines.

Another child of the same family was affected in a similar manner.

The preparation of the brain is in the Museum of the Royal College of Surgeons.

- 938 A part of the intestinum ileum, showing a great determination of blood to the minute arteries belonging to the mucous surface, &c. the effects of purpura hæmorrhagica.

- 939 A portion of intestinum ileum, showing great determination of blood to the mucous surface, which occasioned profuse intestinal hæmorrhage.

From a woman, who died a few hours after a very extensive scalding with boiling water over the chest and abdomen. This was not the effect of inflammation, but the result of excessive determination of blood to the minute arteries of the mucous surface, causing profluvia, and shows decidedly the sympathy

that exists between the vessels of the integuments, and those belonging to the mucous surfaces.

Similar appearances I have seen as the effect of extensive burns.

940 A portion of ileum, inverted, the mucous surface highly inflamed. The patient had intestinal hæmorrhage.

941 Two portions of ileum, inverted, showing acute inflammation of the mucous coat.

A woman, 51 years of age, had been suffering from the effects of a diseased liver for several years; ascites supervened, followed by jaundice, and her bodily powers were greatly reduced by occasional attacks of intestinal hæmorrhage. She was tapped thrice.

The liver was greatly enlarged, the edge of the right lobe extended as low as the anterior superior spinous process of the ilium. Its substance was firmer than natural; a section exactly resembled that of a nutmeg; all the blood-vessels were greatly distended. The gall-bladder contained a very dark green-colored bile, also several biliary concretions, each about the size of a pea. Spleen large. The small intestines were highly injected with blood, particularly the jejunum and ileum, and there was a great quantity of coagulated blood, mixed with mucus, in them, and in the large intestines, but there were no signs of ulceration, nor were there any appearances of disease in the mucous glands.

The heart was healthy, the auricles greatly gorged with blood, as were the coronary veins. The coats of the aorta highly inflamed, the vasa vasorum very numerous and large. The lungs were free from organic disease, but their blood-vessels were greatly distended, and the bronchial ramifications loaded with mucus.

Might not the diseased condition of the liver have occasioned a state of plethora and arteritis, which caused the serous effusion, and the hæmorrhagic action of the minute arteries?

942 Ileum, inflamed, the mucous coat thickened by inflammation and coagulated lymph.

From a patient who died of phthisis pulmonalis.

943 Ileum, inverted, to show the effects of inflammation and ulceration. The patient died of phthisis pulmonalis.

944 A portion of ileum, with hypertrophy of the glandulæ

aggregatæ and solitariæ ; there are also an immense number of elevations, similar to those seen in the duodenum.

- 945 A portion of ileum, the glandulæ aggregatæ and solitariæ greatly enlarged. A child, who died of intussusception ; the history of the case and dissection are published in the Edinburgh Medical and Surgical Journal, Vol. 3rd, with a plate.
- 946 A portion of the mucous coat of the ileum. From a patient who died of phthisis pulmonalis ; the glandulæ aggregatæ were greatly enlarged, but the mucous coat not ulcerated. The intestine was macerated for some time, and the morbid glandular structure pressed out ; the cellular and muscular coats were then removed, to show that the mucous coat had not been ulcerated, where the glands were situated.
- 947 Ileum, inverted, showing the effects of inflammation, ulceration, and sloughing of the mucous surface near the glands. From a patient who died of typhus fever.
- 948 A portion of ileum, the mucous coat destroyed by ulceration, and there is a large ulcerated opening. The patient died of phthisis pulmônalis.
- 949 A portion of ileum, the mucous coat destroyed by ulceration.
- 950 A portion of ileum, thickened by organised lymph ; some of the valvulæ conniventes agglutinated, some portions ulcerated, and there are a great number of scrofulous tubercles between the mucous and muscular coats, which are seen in the preparation.
The patient, a man, died of phthisis pulmonalis.
- 951 A portion of ileum, the serous coat greatly thickened by organised lymph, as was the mesentery ; the effects of chronic inflammation ; the valvulæ conniventes thickened.
- 952 A portion of ileum, with fleshy tumors of various sizes beneath the peritoneal surface ; there were similar growths in some of the other intestines, and what is very remarkable, analogous appearances were seen on the skin in many parts of the body.
The spleen of an infant in the same bottle.
- 953 Ileum, inverted ; villi and minute tubercles shown.
- 954 Ileum and mesenteric glands of a child. The child died of phthisis pulmonalis.

The lungs were nearly filled with scrofulous tubercles and vomicæ. The mucous glands of the ileum and cæcum greatly enlarged, and the mesenteric glands converted into caseous substances of great magnitude; the spleen was also filled with miliary tubercles.

- 955 A portion of ileum, minutely injected with size and vermillion, also the mesenteric glands.

The lungs contained a great number of miliary tubercles, the structure was highly inflamed, and in some portions hepatised.

The whole of the small intestines were affected with miliary tubercles beneath the serous coat; the mesenteric glands were also diseased.

- 956 Ileum, minutely injected; miliary tubercles are seen beneath the mucous coat. From a child; it had convulsive fits.

- 957 Ileum, injected; miliary tubercles beneath the mucous coat, the glandulæ aggregatæ enlarged, mucous covering ulcerated.

This preparation, and Nos. 47, 48, & 49, from the same subject, are splendid specimens.

- 958 Ileum, injected, inverted; scrofulous tubercles beneath the mucous coat, glandulæ aggregatæ enlarged.

- 959 Ileum, injected (inverted), and all the tunics shown, also small scrofulous tubercles.

- 960 Ileum, mucous coat ulcerated, the effect of scrofulous tubercles between the mucous and muscular coats.

- 961 A portion of ileum and mesentery. The man had diseased liver and ascites.

There was a considerable quantity of fluid in the abdomen, the peritoneum was thickly coated with organised lymph, and all the intestines agglutinated; there were two osseous tumors in the mesentery, and a small pendulous tumor on the serous coat of the intestine; these are shown in the preparation.

- 962 A portion of ileum and mesentery. All the coats and the mesentery are inflamed. There is a large fungoid tumor in the latter, also several small ones. From a man, 43 years of age; the liver, lungs, and glutæus maximus affected with fungus hæmatodes.

- 963 Ileum and cæcum, showing hypertrophy of the mucous glands.

- 964 Ileum and cæcum. The glandulæ aggregatæ of the former greatly enlarged, the mucous coat thickened.

- From a child, who died of phthisis pulmonalis. The lungs contained a great number of miliary tubercles. and several vomicæ; the mesenteric glands caseous.
- 965 Ileum, part of the cæcum, and a portion of the colon; from an adult.
The mucous glands enlarged, the mucous surface ulcerated.
- 966 Ileum and part of the cæcum, and its appendix. From an adult, who died of phthisis pulmonalis. The mucous glands in the ileum ulcerated, also those in the cæcum, and its appendix. The lungs nearly filled with tubercles and vomicæ, and the mesenteric glands diseased.
- 967 Ileum, cæcum, and appendix of an adult; the mucous surface ulcerated.
- 968 A portion of ileum, with a part of the cæcum and its appendix, and the mesenteric glands. From a girl, 12 years of age, who died of phthisis pulmonalis. The lungs contained a number of scrofulous tubercles, and vomicæ; the spleen was also affected with the same disease; the mesenteric glands converted into caseous substance, and the mucous glands in the ileum and cæcum enlarged.
- 969 A portion of ileum and mesentery, also part of the colon. The man, 34 years of age, had for a length of time been troubled with cough, and symptoms of chronic dysentery.
The lungs were loaded with miliary tubercles, the mesenteric glands scrofulous, the mucous glands of the small intestines enlarged; the serous coat greatly thickened by chronic inflammation, and there were an immense number of miliary tubercles beneath it, and in the mesentery; the mucous coat of the cæcum and colon is ulcerated.
- 970 A portion of ileum, with the cæcum, and a part of the colon, affected with fungus hæmatodes.
All the coats of the intestines are extremely thick, particularly the mucous, and the arteries turgid, giving them a very deep-red color, which is fixed by alcohol. The appendix cæci is completely obliterated, and converted into a ligamentous substance.
The man had shown symptoms of a diseased liver for several years; during the last three months of his existence, he had suffered severely from attacks of hæ-

matemesis, and the alvine discharges were generally very dark-colored, extremely fœtid, and frequently mixed with blood; ascites came on, and he died suddenly.

- 971 A portion of ileum, affected with melanosis; the uterus was similarly affected. The description is given in the Section on Morbid Uteri.
- 972 A portion of duodenum, inverted. On the sides and edges of the valvulæ conniventes there are seen, in the preparation, a great number of minute projections, not unlike miliary tubercles.

LARGE INTESTINES.—*Healthy and Morbid.*

- 973 Ileum, cæcum, and appendix, with a portion of the colon, inflated. From a fœtus, about the 7th month, the delicacy of structure at such an early age is shown, also the length of the appendix cæci.
- 974 Portion of ileum with the cæcum and colon, of a fœtus at the 9th month, still-born; the two latter intestines filled with meconium.
- 975 A portion of ileum, cæcum, and part of the colon of a fœtus, injected.
It is very singular, that in this specimen there is scarcely any appearance of a cæcum, and not a sign of a vermiform process. This must be considered a congenital mal-formation.
- 976 A portion of intestinum ileum, the cæcum, and part of the colon, ulcerated.
The mucous coat was inflamed, the extent of ulceration is well shown in the preparation, and it is more apparent in the lower part of the ileum and cæcum; in the latter sphacelation had taken place, and the internal surface of the appendix cæci is ulcerated, also the transverse arch of the colon.
This is a remarkable specimen. From a patient who died in the last stage of typhus fever.
- 977 A portion of ileum, with the cæcum, and part of the colon, with an ulcerated opening in the latter intestine. There are also hydatids in the bottle.
A woman, of delicate constitution, had given birth to several children. Nearly three years prior to her

death, she complained of a dull pain in the right hypochondrium, and was frequently troubled with sickness, her bowels generally disordered, sometimes by diarrhœa, or very costive.

Various plans of treatment were employed to improve her health, without effect; she slowly declined in strength, her sallow countenance denoted signs of organic disease in the liver, and this viscus was greatly enlarged.

The abdomen increased, and she was subject to bilious vomiting and purging; these symptoms became more violent and frequent, and every attack was expected to prove fatal; their severity could only be moderated by large doses of opium. The liver acquired such a magnitude as to occupy nearly the whole of the abdomen, and great pain was complained of in both hypochondria. There was a sense of fluctuation, as if effusion had taken place into the abdomen, yet the function of the kidneys was not interrupted, nor was the urine high-colored.

The abdomen became enormously enlarged, and she complained of great pain when slight pressure with the hand was made to examine the extent of the disease.

About a year previous to her death, a more severe paroxysm of vomiting came on, succeeded by excessive diarrhœa, which continued for three days, this reduced the abdomen surprisingly, and what was still more astonishing, an immense number of various sized hydatids were discharged with the fæces, which satisfactorily explained the nature of the disease to be the growths of hydatids in the liver, and showed that an opening of communication had been established between this viscus and one of the intestines, by ulcerative absorption, &c. During this critical effort of nature, the constitutional powers of the patient were greatly diminished, so as to require, then, and for some time afterwards, a nourishing and stimulating plan of treatment. To the astonishment of all who saw her, she slowly improved in health, yet the liver was large. The hydatids were in a perfect state, and several dead ones were occasionally voided with the fæces; at this period it was imagined that nature might effect a cure, but the distension of

the abdomen again came on, with vomiting, purging, and the discharge of hydatids, and ascites with peritoneal inflammation, completed her misery.

On opening the abdomen, no cavity was seen, the peritoneum having formed firm adhesions with the reflected coverings on the viscera, and much dissection was required to discover the different intestines. The liver occupied the front of the abdomen, both the right and the left lobes having descended as low as the anterior superior spinous processes of the ossa ilia; it completely obstructed the view of the intestines, and the convex surfaces of the liver had pushed up the diaphragm, and lessened the capacity of the thorax.

The peritoneal covering of the liver was semicartilaginous, the external figure of this viscus very irregular. On cutting into it, the natural structure appeared nearly destroyed, and it seemed like an immense cyst, containing myriads of various sized hydatids, and there were a great number which had burst, and which appeared to have been of an immense size. The cysts of the hydatids were dense, and some of them thickly covered with coagulated lymph. Firm adhesions had taken place between the under surface of the liver, and the colon, and an opening of communication was formed between these parts, which allowed the escape of the hydatids during the life of the patient.

On some of the small and large intestines, the serous coat was thickly beset with small hydatids, and there were also large hydatids on the mesentery and omentum. The spleen was not diseased.

The heart and lungs were so greatly intruded upon by the ascent of the liver and diaphragm, that it appeared astonishing how their function had been carried on. The thoracic viscera were healthy.

On dissecting some of the hydatids, I found that the real hydatid was surrounded by four coverings of a gelatinous consistence, and transparent.

This was a very remarkable case.

978 Ileum, cæcum, and part of the colon, inverted.
A man, 36 years of age, had shown symptoms of organic disease in the lungs, for several years; about four months prior to his death, he occasionally voided

pus and blood with the fæces. The lungs were in parts consolidated by small tubercles, and coagulated lymph; the other portions were of a black color, as in melanosis.

The mucous glands of the small intestines were greatly enlarged, the mucous coat of the cæcum extensively destroyed by ulceration.

- 979 Part of the ileum, cæcum, and part of the colon, inverted. The mucous glands in the ileum ulcerated, also those belonging to the cæcum and colon. From a man who died of phthisis pulmonalis; the mesenteric glands are enlarged by caseous deposits.

- 980 A part of the ileum, cæcum, and colon. The mucous coat thickened, and partly ulcerated. From a man who died of chronic dysentery.

- 981 A portion of ileum, with the cæcum, and part of the colon.

The cæcum and colon are immensely large, the serous and muscular coats greatly thickened by chronic inflammation, and the mucous surface destroyed by ulceration and sphacelation, as seen in the preparation. From a man who had suffered for several months from chronic dysentery.

This is the most remarkable specimen of the kind I ever saw.

- 982 Ileum, cæcum, and a portion of colon, preserved in alcohol. This is a splendid preparation.

The uterus was diseased; the description is given in the Section on Morbid Uteri.

- 983 A portion of the intestinum rectum and cæcum, with a dessert spoon in the latter, which was swallowed by an insane man, whilst under confinement in an Institution for Lunatics.

He was 22 years of age, and well educated; his mental powers became affected, symptoms of insanity daily increased, which rendered him unfit for the situation he held.

Previous to his admission into the Asylum, he took a large dose of Tincture of Opium; the bad effects were prevented by the timely employment of the stomach pump.

In another paroxysm of desperation, he jumped out of a window, two stories high, into the area, and was seriously injured.

During the time he was under restraint, he was at times so outrageous, as to require being kept in a strait-waistcoat. One of the keepers left a basin-ful of broth, and a silver spoon, with the patient; on his return, he found the spoon missing; on enquiring what had become of the spoon, the answer was, "he did not know where it was," which made the matter very mysterious, not only to the keeper, but to all those belonging to the Establishment.

From the effects of proper medical treatment and regimen, this man became more rational, and his health improved so much, that it was no longer necessary to keep him under restraint, consequently he was allowed to be at liberty.

Shortly after his removal from the Mad-house, he informed his mother, that during his confinement, he had so far recovered his mental powers, as to be disgusted with the idea of the situation he had been placed in, and that "life could not be a blessing to him," he therefore determined on committing self-destruction, by swallowing the spoon, which he declared he effected, with the most agonizing sufferings of suffocation. Although this account was told to the mother, couched in a solemn manner, and with a correct state of mind; yet she could not help thinking it improbable, and that he had only imagined such an event had taken place, whilst the brain was in a disordered state. Soon after this period, his health gradually declined, although he lived abstemiously, his digestive organs were disordered; he suffered from dyspepsia, and frequently complained of an acute pain in the region of the cæcum, and he still persisted in declaring, that all these symptoms were occasioned by the spoon he had swallowed.

Several professional gentlemen saw this patient, listened to his story, and carefully examined the abdomen, to detect, if possible, the presence of a foreign body in the intestines. All were of opinion that he could not have swallowed a spoon; they imagined his disordered state of health was occasioned by a morbid condition of the liver and intestines. He continued to suffer from the effects of pain in the situation of the cæcum and colon, and frequently said he felt the motion of the

spoon; he was teased with diarrhœa, and the evacuations were often mixed with blood and pus.

Symptoms of diseased liver came on, he was slightly jaundiced, and the secretion of urine scanty; ascites followed, with œdema of the lower extremities, and he experienced distressing difficulty in breathing.

By the advice of a Physician, I performed paracentesis, but merely to give the patient temporary relief, and nearly a bucket-ful of water was drawn off.

Symptoms went on favorably for nearly three weeks, and some hope was entertained that he might rally; but he still complained of pain in the situation of the cæcum; his bowels were not easily excited into action. The fluid having been evacuated from the abdomen, and being greatly emaciated, I was induced to carefully examine with my hand if I could feel the spoon, when to my astonishment, I detected a solid substance in the situation of the cæcum; which induced me to believe that it was the spoon he had swallowed.

A short time previous to his death, the urine and fæces were voided involuntarily, and although the greatest care was employed to keep him dry and comfortable, the integuments covering the sacrum became highly inflamed, and sphacelated, and extended to the theca vertebralis, and the membranes of the brain; which caused death.

On opening the writing desk of the deceased, a letter was found, addressed to his mother, of which the following is a copy.

“ ‘To my dear Mother,

“ In the event of my death, let me be
 “ opened soon after by medical men, any you may
 “ wish, but I wish Mr. LANGSTAFF to be present, and
 “ if he pleases, to operate.
 “ The spoon will be found in my intestines; I have
 “ given it to my mother, but she is at liberty to dis-
 “ pose of it in any way, or to whom she may think
 “ proper; if the possession of it is desirable to any of
 “ the faculty for the public good, scruple not to com-
 “ municate it, or publish any of the facts or circum-
 “ stances relative to the above matter, if the know-
 “ ledge of them will benefit the community.

“ I forced the spoon down my throat with my right
 “ hand immediately after dinner, while in my room,
 “ at Mr. TERRY’S, of Sutton, Coldfield, about the
 “ beginning of October, 1827, and remember the
 “ detail of the whole affair. Let there be two
 “ members of my immediate family present during
 “ the work of dissection.”

The sinuses of the brain were greatly distended with blood, the arachnoid membrane lining the inner surface of the dura mater, as well as that covering the pia mater, showed the effects of chronic inflammation; there was also serous effusion of a milky fluid between the arachnoid and pia mater, on the surface of the cerebrum, as well as where the membrane dips into the furrows of the convolutions.

The convolutions of the brain were greatly flattened, and the structure remarkably firm; but there were no appearances of active inflammation. In the lateral ventricles, also in the third and fourth, there were about two ounces of water.

The arachnoid and pia mater showed a greater degree of density from chronic inflammation at the base of the brain, than where they cover the upper surface. There was also great thickening of the membranes near the valve of the brain, where they cover the pineal gland and corpora quadrigemina; a morbid change I have frequently noticed on examining the brain of incurable maniacs.

On cutting through the medulla spinalis, to remove the brain, water was seen between the arachnoid membrane and pia mater, and these tunics were highly inflamed.

There were old standing adhesions of the pleuræ, and about a pint of water in each side of the thorax; the lungs and heart normal; the latter remarkably small. The peritoneal coat of the small intestines was firmly agglutinated by lymph.

The mucous coat of the stomach, as well as the duodenum, jejunum, ileum, and cæcum, were more vascular than natural, and there were evident signs of their having been ulcerated in different portions, and that nature had put a perfect stop to the ulcerative process, by uniting the boundaries to the sub-mucous tissue. The greatest degree of mischief had been effected

by the passage of the spoon through the ileo-cæcal valve, which is greatly dilated, and the circumference thickened; this is shown in the preparation.

The mucous coat of the cæcum is nearly destroyed by ulceration; the spoon was found in this intestine, with the bowl downwards, where it had formed a large sac, which prevented its passage into the colon. The spoon is shown in the preparation, and from chemical change was rendered perfectly black.

984 Part of the cæcum, the mucous coat inflamed, and partly ulcerated.

985 Intestinum cæcum, ulcerated, &c. The principal destruction is in the mucous surface near the caput coli; the valve constricted, but there is not much disease in the ileum.

The small remains of the mucous coat of the cæcum, presents a blackened or melanoid appearance, which is partly retained in the specimen.

The valve of the cæcum is denoted by a piece of green glass, which was passed through the ileum into the cæcum; a black piece of glass shows the opening of the appendix. A white piece of glass directs to an ulcerated aperture in the cæcum, which communicates with the external surface of the peritoneum in the right hypochondrium, where an abscess formed, and was opened during life; it was supposed to communicate with the liver.

In this preparation, small tubercles of a carcinomatous and medullary character are seen, which had their origin in the cellular tissue connecting the coats of the bowel. These growths had occasioned progressive absorption, and ulceration of the principal part of the muscular and mucous surface of the cæcum, and the superior part of the caput coli; the cellular coat had ulcerated, and adhesions had formed between the healthy part of this coat surrounding the abscess, and the reflected portion of peritoneum in the iliac fossa; this excited inflammation of the cellular tissue connecting the peritoneum and abdominal muscles, thus accounting for the abscess which presented in the integuments covering the right hypochondrium; which was supposed to have its origin in the liver. The peritoneum was inflamed, and its reflections agglutinated by lymph.

The liver was very large, and of a deep yellow color; it contained several carcinomatous and medullary tubera. There were several calculi in the gall-bladder.

The patient, 60 years of age, had suffered severely nearly two years with hepatic disease; she was jaundiced, her bowels greatly disordered; evacuations mixed with pus and blood. The abscess externally was very large, the matter evacuated by the opening was of the most fœtid kind; a profuse discharge continued for nearly two months; irritative fever came on, which caused the death of the patient.

986 Cæcum, and its appendix, with a part of the ileum.

The mucous coat ulcerated. From a patient who died of typhus fever.

987 A portion of ileum and cæcum. From a woman, who died of typhus fever.

The arachnoid membrane, pia mater, and substance of the brain were inflamed; the mucous coat of the ileum inflamed, thickened, and partly ulcerated; the glandulæ aggregatæ immensely enlarged. The coats of the large arteries inflamed.

This is a splendid preparation.

988 Cæcum and colon. From a patient who died in the last stage of typhus fever, in the Fever Hospital.

The mucous coat of the ileum was inflamed, partly ulcerated, and the glandulæ aggregatæ enlarged.

The internal surface of the cæcum nearly destroyed by ulceration and sphacelation, which in some parts had extended through all the tunics; the coats of the colon had undergone similar morbid changes.

The brain was not examined. The internal lining of the bronchi highly inflamed.

See Section on Morbid Tracheæ.

989 Ileum and cæcum. The mucous coat destroyed by ulceration; the muscular and serous coats greatly thickened. From a woman who died of chronic dysentery.

990 Ulcerated cæcum and colon, inverted.

This preparation was obtained from the same person as preparations 912 and 913.

A man, 30 years of age, for several years previous to his death, had been subject to frequent attacks of diarrhœa, what might be termed chronic dysentery;

about six months previous to his dissolution, the intestines became more disordered, accompanied with pain in the abdomen, and the discharges from the bowels were frequently mixed with mucus, and sometimes with pus and blood, and smelt offensively; his brain became affected, and symptoms like typhus fever supervened.

Although the patient had the advice of several physicians, the progress of the disease could not be checked, but merely palliated; he had been very corpulent, but became as greatly emaciated as a person with phthisis pulmonalis.

The stomach and intestines were greatly distended with air; the peritoneum showed signs of chronic inflammation, and all the intestines were agglutinated.

The liver was pale-colored, but did not exhibit any signs of organic disease; the gall-bladder contained an albuminous secretion. The spleen was healthy; the mesenteric glands were affected with medullary sarcoma; there were tumors of the same kind in the mesentery, and the absorbent glands, from the diaphragm to the groin on both sides, were similarly diseased.

All the mucous glands belonging to the small and large intestines were diseased, and the mucous coat of the cæcum and colon was ulcerated; all the coats were tinged of a black color, as in melanosis, which appearances are seen in the preparation.

There were old standing adhesions of the pleuræ in both sides of the chest; the lungs healthy.

This I consider a malignant disease, and congenital.

991 A portion of cæcum, affected with punctated melanosis in the mucous coat.

A man, who had been afflicted with hæmorrhoids and fistulæ in ano for a considerable length of time, applied to a Quack, who employed the most stimulating escharotics, which had nearly destroyed the whole verge of the anus, and did considerable mischief to the internal surface of the rectum. Soon after this the inguinal glands on the left side, began to enlarge, and were very painful; matter formed, and the integuments ulcerated. The edges of the ulcer formed verrucal appearances, the discharge was very offensive, and there were occasional attacks of venous hæmorrhage.

Ultimately the iliac glands enlarged, and the thigh, leg, and foot, became greatly swollen, as in phlegmasia dolens.

The discharge of pus with venous blood, from an ulcer in the groin, and from the verge of the anus, was profuse, which greatly reduced his bodily powers; he became jaundiced, irritative fever supervened, and the patient died.

The iliac absorbent glands, and those extending to the diaphragm, were in a sphacelated state; the iliac and femoral veins were obliterated, and the external iliac artery and vein contracted by the cancerous growths which surrounded them.

The viscera of the thorax and abdomen healthy, except the cæcum, which was slightly affected with melanosis.

992 A portion of duodenum and cæcum of an adult; the valves of the former very large, and slightly thickened by chronic inflammation; the mucous coat of the latter melanotic.

993 A portion of colon; a ligamentous band had formed round its circle, which had constricted the caliber of the intestine; the same morbid change had also affected several of the intestines; lymph is thickly deposited on the mesentery; the stomach was affected with carcinoma.

I have seen this constricted state of bowel in a greater degree in internal strangulated hernia.

994 Incipient intussusception. The child from whom this specimen was taken, was fourteen months old; the bowels, from its birth, had generally been in a disordered state. Symptoms of obstructed intestines came on, which could not be relieved by medicine; vomiting and symptoms like internal strangulated hernia succeeded, and the child died convulsed. The stomach and small intestines were greatly distended with air.

The ileum had not traversed more than two inches into the colon, and only a part of the cæcum had followed it, the appendix remaining on the outside of the volvulus, as seen in the preparation. But the protruding parts were highly inflamed, appearing almost in a sphacelated state; there were also a great number of scrofulous tubercles beneath the mucous

surface of the small and large intestines, and the mucous glands were enlarged ; they are shown in the preparation.

The mesenteric glands were scrofulous ; all the other viscera healthy.

In this case I am induced to imagine, that the morbid state of the intestines caused the violent diarrhœa, which latter produced introsusception ; I have several preparations to corroborate this opinion, and there is one from my collection in the Museum of the Royal College of Surgeons.

Drastic purgatives have, in some instances, produced this disease. I had two preparations to prove this fact, which were taken from dogs killed by too large a dose of croton oil ; in one of the specimens, the invaginated intestine was sphacelated ; they are in the College Museum.

- 995 Introsusception. The ileum with the cæcum had passed through the valvula coli, and projected into the ascending colon ; the invaginated parts were greatly constricted, as in strangulated hernia ; the mucous coat was highly inflamed, and lymph had been deposited in great quantity on the ileum, which had become organised, as seen in the preparation ; had the patient lived a few days longer, this portion of the bowel would have sphacelated.

The mucous glands in the duodenum and ileum were enlarged, and the internal coat inflamed ; the mesenteric glands contained caseous matter ; all the other viscera healthy.

A boy, of a very delicate constitution, 12 years of age, became suddenly seized with pain in the bowels, followed by tormina and tenesmus ; he was also violently sick, and his bowels could not be acted on. He lived three days.

This preparation illustrates admirably the appearances of introsusception. I never saw this disease in an adult, except in the case described in the history of No. 998.

- 996 Introsusception, which had commenced at the ileum. This intestine had passed to a considerable distance within the transverse arch of the colon, carrying with it the cæcum, and its appendix.

The portion of ileum introsuscepted, is highly inflamed, thickly coated by coagulated lymph, and if the

patient had lived a little longer the part would have sphacelated. The cæcum is highly inflamed, the appendix not inverted, nor have I ever found this to have taken place in any case of intromission; the mucous coat of the colon, inflamed.

The child 8 months old, had been particularly healthy from its birth; it became, in consequence of dentition, affected with diarrhœa and violent sickness. These symptoms increased, although proper remedies had been given to subdue their violence. The sickness became more distressing, and dysenteric symptoms supervened, with discharges of blood and mucus; the child was in agonizing pain, and the abdomen became tense, and when pressed the pain was increased. The case was considered to be one of intromission, and it was very evident it would terminate unfavorably; convulsions came on, and the child expired.

This is an excellent specimen of this fatal disease; it exactly resembles a strangulated femoral, or inguinal hernia.

997 Intromission. A fine healthy child, three months old, was suddenly seized with pain in the bowels, followed by violent vomiting, and unavailing attempts to relieve them. These symptoms increased, and nothing but blood and mucus passed from the bowels; the vomiting became violent, and the child seemed in great agony. The abdomen enlarged, a tumor could be felt in the left hypochondrium, and there was prolapsus ani, denoting intromission; convulsions came on, and the child expired.

The jejunum and duodenum were greatly distended with fluid excrementitious matter, and the mucous coat was inflamed.

The ileum had protruded through the valve of the colon, as far as the sigmoid flexure of this intestine, carrying with it the cæcum, and a portion of the colon.

The mucous coat of the invaginated intestines was highly inflamed, covered thickly with coagulated lymph, and in one part sphacelated. It is very singular that in this case, there was, in addition to an extensive volvulus in the usual way, a smaller invagination in the opposite direction, which is shown in the preparation.

In consequence of the presence of the mother at the post mortem examination, who was desirous that no part should be taken away, the whole of the disease was not removed; there is however quite sufficient to illustrate its character.

A paper on this case, with a plate, is published in the Edinburgh Medical and Surgical Journal, No, 11, 1807, and Mr. SAMUEL COOPER has quoted it in his invaluable Dictionary on Surgery.

998 A splendid specimen of intussusception of the intestinum rectum, produced by the growth of a malignant tumor.

The man had for a considerable length of time been troubled with a costive state of bowels, which required active medicine to relieve them.

About eight months previous to his death, symptoms denoting disease of the intestines came on; he complained of pain in the lower part of the abdomen, and it required active purgatives and enemata to keep them in tolerable order.

He also experienced great pain in voiding the fæces, (tormina and tenesmus), and they were generally formed into scybalæ, and presented appearances like lumbricoides, mixed with blood and pus; he was likewise annoyed with hæmorrhoids, and prolapsus ani. The patient's health declined, ascites came on, and he died.

The patient had been seen by several Surgeons, all were of opinion that the disease was a stricture in the rectum, and several modes of treatment were adopted to relieve his dreadful sufferings, but without effect. The abdomen contained nearly two gallons of yellow-colored fluid; the liver was very small, extremely dense in structure, and presented that granulated appearance generally seen in dram-drinkers. The gall-bladder was distended with viscid dark-colored fluid; spleen small, capsule dense. The peritoneal covering of the intestines was free from inflammation, the large bowels were immensely dilated with fæces, formed into large hard scybalæ, and the mucous surface highly inflamed, particularly in the rectum.

On examining this intestine, a fungus growth was seen projecting into its cavity about five inches from the verge of anus. The tumor is fungoid and carcino-

matous ; it had its origin between the muscular and mucous coats, and by progressive absorption had made its way into the bowel.

The growth of this tumor had produced a dense stricture ; the aperture was very small, as shown in the specimen by the insertion of a piece of glass ; this constricted portion of the canal not admitting the fæces to pass in the ordinary way, and violent efforts being made to evacuate their contents, gave origin to what might be denominated an introsusception.

This is a very remarkable case, and from the appearance of the morbid parts, it is evident that the employment of bougies would have been highly injurious. They ought never to be used in malignant strictures of the rectum, or œsophagus, but only in cases caused by condensation of the sub-mucous tissue, as in strictures of the urethra. The fungus growth greatly resembles cancer scroti.

999 A portion of the transverse arch of the colon of a child, the coats greatly thickened, the mucous surface inflamed, and the bowel much contracted. The child had violent diarrhœa, attended with tenesmus, which produced convulsions, and death.

1000 A portion of colon, from a native of Calcutta. The mucous coat greatly thickened, and formed into rugæ ; the mucous glands numerous, the effects of dysentery.

1001 A portion of colon, the mucous coat greatly thickened. and in parts sphacelated, the effects of chronic dysentery ; the cæcum was also affected.

1002 A portion of the transverse arch of the colon ; the mucous coat thickened, the glandulæ solitariæ very distinct. The patient died of dysentery.

1003 A portion of colon, from a man who died of dysentery, in Calcutta. The mucous coat greatly thickened, and ulcerated.

1004 Ulcerated colon. A man, 40 years of age, had long been afflicted with all the symptoms denoting organic disease of the liver ; dysentery came on about three months previous to his death ; he was greatly emaciated.

The liver large, very solid and granulated, as in dram-drinkers, the gall-bladder filled with green viscid secretion ; spleen large.

The peritoneum thickly covered with lymph, and the intestines agglutinated.

All the mucous glands in the small intestines are greatly enlarged; the mucous coat is highly inflamed, in some portions ulcerated, and there are several fistulous openings through all the tunics.

- 1005 A portion of colon, the mucous coat completely destroyed by chronic dysentery, and lymph had been deposited on the muscular coat in considerable quantity, which had become organised; there is also a great accumulation of adipose substance between the serous and muscular coats.

- 1006 A portion of the transverse arch of the colon. The mucous coat ulcerated to a considerable extent; the ileum and cæcum affected with the same morbid change. There were several scrofulous tubercles in the liver and mesentery, and the lungs were filled with tubercles and vomicae.

- 1007 A portion of colon, the internal coat ulcerated, and there are two openings through all the tunics, the serous coat greatly thickened.

From a woman, 64 years of age; about five years previous to her dissolution she became disordered in her digestive organs; she was troubled with dyspepsia and costiveness, which obliged her to take very active medicine.

During the last year of her life, the signs of disease became more apparent, and her constitutional powers began to diminish; she was obliged to take drastic purgatives, and to have recourse to enemata; she complained of great pain in the situation of the cæcum, and was much annoyed by flatulence, and sometimes attacked with vomiting.

Her countenance was sallow, and from having been very corpulent, she became extremely emaciated; the alvine discharge consisted generally of scybalæ, sometimes mixed with pus and blood.

The pain in the abdomen was at last so distressing, and accompanied with such violent vomiting, as to require large doses of opium, and suppositories: the abdomen became distended with air; and she gradually sank and died.

The lungs were healthy, the pleuræ adhered firmly; the heart was remarkably soft, the edges of the mitral

valves and the aortic valves thickened by chronic inflammation.

Liver very pale-colored, and bloodless, and there were a few serous cysts in its substance.

The gall-bladder contained a small quantity of fluid, which was not much tinged with bile; the spleen large, and remarkably soft, the pancreas healthy.

The external surface of all the intestines presented a dark livid hue, and they were firmly agglutinated by lymph.

The mucous coat of all the small intestines, especially the ileum, was in various parts destroyed by ulceration (in all probability produced by the morbid state of the glands), but the greatest degree of disease was seen in the cæcum, colon, and rectum; the mucous coat having been partly destroyed, and sphacelation, and fistulous openings produced, communicating with the abdominal cavity. In the cæcum and colon, several large portions of solid fæculent matter were found, which from their density, must have remained there a considerable length of time. The muscular structure of the large intestines was flaccid, which perhaps might have been occasioned by their not having the power of performing their peristaltic action naturally. The mesenteric glands normal, also the pelvic viscera, and kidneys.

Was the disease, in this case, caused by a morbid state of the mucous glands of the intestines, or was it produced by a frequent state of constipation, which lessened the power of the muscular fibres, and prevented the expulsion of the alvine excretions?

1008 A portion of the transverse arch of the colon, showing extensive ulceration of the mucous coat, and there appears to have been an attempt of nature to repair the injury, by depositing lymph on the muscular coat, which had become organised. The remains of the ulcerated part, at its edges, present a shaggy appearance. From a woman who died of phthisis pulmonalis, who had suffered dysenteric symptoms for a number of months.

This is an interesting preparation.

1009 A portion of the sigmoid flexure of the colon; an immense carcinomatous and fungoid tumor had

formed beneath the peritoneal coat, and by ulcerative absorption, had destroyed a portion of the muscular and mucous coats, as seen in the preparation; the rest of the mucous surface greatly thickened. The ovaria were carcinomatous, also the iliac and inguinal absorbent glands. The patient was an old woman, who died of phlegmasia dolens.

The uterus was affected with carcinoma. See the Section on Morbid Uteri.

- 1010 A portion of the inferior part of the sigmoid flexure of the colon, with a stricture.

The stricture, from dissection, appeared to have been produced by chronic inflammation of the cellular tissue belonging to the coats of the intestine, and not by malignant deposits.

The peritoneal coat, near the stricture is very dense, and the circle of the intestine presents an appearance, as if a tight ligature had been applied: the mucous membrane does not appear much altered in structure, except where the stricture is situated; there it is sphacelated, as may be seen in the specimen.

The stricture was very dense, the aperture only large enough to admit the passage of a moderate sized bougie, and it was plugged up with what appeared hardened fæces.

On opening the abdomen, a considerable quantity of serum, tinged with blood, escaped, and there were marks of very active inflammation of the peritoneum and its reflections on the viscera.

The stomach, small intestines, cæcum, and colon, especially the latter, as far as the seat of the stricture, were enormously distended with air and fæces.

The mucous coat of all the intestines was highly inflamed, particularly the colon, which was ulcerated, and partly sphacelated.

The liver was granulated; spleen solid, and the capsule cartilaginous.

From a woman, 55 years of age, who had for nearly two years been troubled with disordered bowels; they were obstinately costive, and she was frequently sick and dyspeptic.

About six weeks previously to her death, great pain was

complained of in the abdomen, accompanied with vomiting ; and the most active purgatives or clysters hardly produced any effect. These symptoms gradually increased in violence, the pain in the abdomen became agonizing, her bowels could not be acted on ; the abdomen was greatly distended, stercoraceous vomiting and singultus came on, and all the symptoms of a strangulated internal hernia, which caused death.

1011 Mal-formation of the intestinum rectum, with the external and internal organs of generation, and the urinary bladder.

A female infant ; it lived five days from the time of its birth ; it sucked freely, but frequently, and the mother noticed that the child had no evacuations from the bowels, although it made straining efforts to relieve them. Aperients had been given, and clysters were attempted to be administered, when it was found they could not be passed into the rectum. A surgeon was consulted ; on examining the rectum with a bougie, it was ascertained that there was mal-formation of this intestine, and the only chance of saving the child, was by endeavouring to form an artificial anus, and he also properly stated, that the success of the operation greatly depended on the nature and seat of the mal-formation.

An armed trocar was introduced ; on withdrawing the canula, only a small quantity of fluid escaped, tinged with a little blood, without any meconium.

There was no discharge from the bowels ; the child continued to vomit, and died on the fourth day after the operation. The rectum was dilated into an immense cul de sac, and terminated where the peritoneum covers the posterior and inferior part of the uterus, and is reflected over the anterior part of the intestinum rectum, so that the inferior part of this bowel, instead of ending in the natural way, at the anus, was situated at the brim of the pelvis.

The large intestines were greatly dilated with meconium. On carefully examining the parts, it was seen that the verge of the anus entered the vagina, and on cutting open this tube and the bladder, an opening of communication was detected in the vagina, close to the cervix uteri, and into the bladder,

near the termination of the right ureter, which had been made by the trocar, as indicated in the specimen by a black bristle. The vagina very capacious, the internal surface plicated, the cervix uteri very long, the os uteri large.

In consequence of the extent of mal-formation, it is very evident that no blame could be attached to the operator, as it was perfectly correct to attempt to establish an outlet for the contents of the bowels.

Sometimes the rectum terminates within a short distance of the anus, in some of these cases there is an appearance of an external opening, in others no vestige of this is seen; occasionally the rectum terminates in the bladder; this fact is seen in a mal-formed fœtus. See Section on this subject.

- 1012 Mal-formed rectum. The infant lived only 48 hours from the time of birth; it could not void fœces or urine; it was extremely restless, and convulsions came on, which occasioned death.

The large intestines, particularly the lower, were greatly distended with meconium. The rectum terminated in a cul de sac, about two inches and a half from the anus, and a narrow process of condensed cellular substance proceeded from this point to the sphincter ani.

The anus presented a natural appearance to the extent of a quarter of an inch, where it became obliterated. The bladder was empty, and its muscular fibres very large; the ureters and pelves of the kidneys were immensely distended with urine, which was explained for by the openings of these tubes into the bladder being impervious.

- 1013 An opening of communication between the urinary bladder, rectum, and vagina, in a fœtus; the effects of mal-formation.

- 1014 An imperforate anus, in an infant; it lived three days from the time of its birth. It was noticed by the nurse that the child had no evacuations from the bowels, was extremely restless, and made great efforts to pass a motion. The accoucheur who attended the mother examined the anus of the child, and found the rectum imperforate; he considered the case irremediable, and did not advise an operation.

The large intestines were loaded with meconium, particularly the rectum; this intestine was found to terminate in a cul de sac, about half an inch from the verge of the anus.

Probably the life of this infant might have been saved by an operation.

- 1015 Rectum of an infant, terminating in a large cul de sac; the intestine inverted, to show the mucous coat, which is tinged with the meconium. The child lived four days, suffering severely from vomiting, and violent efforts to relieve the bowels. There were no signs of an anus, and as no impulse could be felt when the child was making strong efforts to relieve the bowels, the Surgeon who had the management of the case, satisfied himself by allowing the child to die without attempting to make an artificial opening.

The large intestines were enormously distended with excrementitious matter and meconium, and the mucous coat was tinged by the latter. The rectum terminated at the brim of the pelvis, and was connected to the superior part of the sacrum only by a kind of meso-rectum.

The mucous coat of the stomach and small intestines was of an unhealthy brownish color, which seemed to be occasioned by a morbid secretion from these parts, the child having frequently vomited a dark-colored fluid.

The post mortem inspection clearly proved the correct opinion the Surgeon had of the nature of the case, which induced him not to propose an operation.

- 1016 The inferior part of the rectum. The mucous coat greatly thickened, the effect of hæmorrhoids.

- 1017 The inferior portion of the intestinum rectum, showing internal and external hæmorrhoids.

- 1018 The lower part of the intestinum rectum, with the prostate gland, the vesiculæ seminales, and vasa deferentia.

The mucous coat of the rectum greatly thickened; there are a number of large piles at the verge, and several long fistulæ, which are shown in the preparation by bristles, and pieces of colored glass.

The patient had been operated on for fistula in ano, but the disease some months afterwards came on,

in several other parts of the bowel ; having symptoms of consumption, it was thought prudent not to propose another operation. He died of phthisis pulmonalis.

The lungs were nearly filled with miliary tubercles and large vomicæ, and the pleuræ adhered very firmly ; the bronchial tubes and trachea highly inflamed, and filled with pus and mucus. The mesenteric glands caseous, and the mucous glands in the small intestines enlarged, some of them ulcerated.

I have frequently noticed the connection of hæmorrhoids and fistulæ with phthisis pulmonalis.

- 1019 Inferior part of the intestinum rectum, with the verge of the anus, and a portion of integument belonging to the perinæum and scrotum.

From a man who died of phthisis pulmonalis. For many months previous to his death he suffered from hæmorrhoids and fistulæ in ano, and he had been operated on for this disease some years ago.

There are several fistulæ in the rectum, some of them very extensive, the sinuses are very capacious, and the internal surface shows the character of a secreting membrane ; there are also fistulæ in perinæo, which in the preparation are denoted by black bristles, and pieces of glass ; there is a large pile at the verge of the anus.

The pleuræ adhered firmly, the lungs were nearly consolidated by scrofulous tubercles ; they also contained several vomicæ. The bronchial tubes, the trachea, and larynx, were greatly inflamed, and some portions of the annuli of the trachea, absorbed ; and the under surface of the epiglottis and rima glottidis greatly thickened by chronic inflammation.

The liver was granulated, the mesenteric glands caseous. See Section on Morbid Trachea.

Two months previous to the death of this patient, an abscess formed on the upper part of the sternum ; it burst, and a considerable quantity of pus escaped, of a scrofulous kind, which continued to flow for a length of time, and occasioned aphonia. At this time the cough and expectoration diminished : the part gradually healed, the cough became again distressing, and the expectoration very profuse, which caused death. I have seen three similar cases.

1020 Intestinum rectum, enlarged in its circumference to an enormous size ; its coats prodigiously thickened, more especially the muscular. From an incurable maniac. He had for a length of time a constipated state of bowels (a condition I have frequently noticed in maniacs and idiots), and frequently was not relieved for several days. In consequence of not being strictly attended to by those who had the care of him, he was attacked with violent vomiting, which was followed by distension of the abdomen, and he appeared in great agony ; his bowels could not be relieved either by drastic purgatives or clysters ; stercoraceous vomiting came on, succeeded with singultus, under which he sunk.

I was requested to inspect the body.

There was an immense quantity of air, and fæculent matter in the cavity of the abdomen. The whole of the large intestines were of an immense size, more especially the rectum, although they were completely empty. The protrusion of the fæces into the cavity of the abdomen, was occasioned by a laceration of a part of the transverse arch of the colon.

1021 Intestinum rectum, ulcerated ; the uterus and appendages shown.

A woman, of a scrofulous diathesis, for nearly two years was teased with a cough, accompanied with pain in the chest ; she expectorated freely, and her bowels were frequently relaxed. Symptoms of phthisis pulmonalis gradually increased, she became greatly emaciated, and complained of great pain in the abdomen, and difficulty in voiding fæces, which were tinged with blood and pus. These symptoms increased, the bowels were constipated, and required active purgatives and clysters to relieve them. A constricted state of the rectum was at this time suspected, an examination with a bougie was made, which denoted a diseased state of this intestine, six inches from the anus. About four months previous to her death, the pulmonic symptoms became more distressing, and the discharge of pus with the fæces was very profuse ; hectic fever came on, and the patient died. The

lungs were loaded with scrofulous tubercles, and there were several excavations; the lining of the trachea and ramifications of the bronchi was inflamed, and in some parts ulcerated.

The liver was slightly granulated, the mesenteric glands converted into scrofulous masses; the mucous glands of the ileum greatly enlarged, and several of them ulcerated; the mucous surface of the cæcum was also ulcerated.

The internal surface of the colon, and superior portion of the rectum was thickened by chronic inflammation, more especially where it is reflected over the pelvic viscera.

The anterior part of the body of the uterus appeared healthy, also its mucous surface; the ovaria were formed into large solid masses, the right ovarium the largest, being of the size of a large orange. The morbid action in these parts had produced firm adhesion between the peritoneal surface covering the fundus and posterior part of the uterus, and that portion which is reflected over the anterior part of the intestinum rectum. The depositions of lymph on these parts were remarkably thick and irregular in figure.

The growth of the ovaria had produced inflammation of the coats of the rectum, and an ulcerated opening of communication had been formed between these parts, at about six inches from the verge of the anus; it is about the circumference of a six-pence (as seen in the preparation), and has well defined and healed edges. The caliber of the rectum was constricted, the mucous surface ulcerated.

On cutting through the ovaria they appeared fibrous, similar to those often seen in the substance of the uterus, but not of a malignant kind.

A daughter of this woman died at the age of 26 years, of phthisis pulmonalis.

1022 A part of the intestinum rectum, inverted.

Several portions of the mucous coat extensively ulcerated, and lymph had been deposited on the muscular coat; this had become organised, and appears to have put a stop to the ulcerative process.

From a man who had been afflicted with chronic dysentery for several months.

- 1023 Inflamed and ulcerated intestines, injected with size and vermillion. A portion of the duodenum and jejunum, and a considerable part of the colon and rectum are preserved, to show the extensive state of disease in the mucous membrane. The lungs were nearly filled with miliary tubercles, and there were several large excavations. The mucous membrane of the trachea and œsophagus highly inflamed, and the former ulcerated. The liver very large and granulated, the peritoneal coat of the intestines inflamed, and all of them felt as thick and fleshy as those of a large Turtle. The whole of the mucous coat of the intestines highly inflamed, ulcerated, and in several parts greatly thickened and corrugated. The patient, a man 50 years of age, had led a most irregular life; for several months he had been afflicted with cough, and purulent expectoration, and about two months previous to his death was tormented with diarrhœa, and voided pus and mucus, sometimes blood; hectic fever came on, and he expired.
- 1024 A portion of rectum. The mucous coat of a dark color and partly ulcerated; the effects of spirit of turpentine, which had been swallowed. The stomach and small intestines were also affected.
- 1025 A stricture at the verge of the anus. From a female child seven months old; it had been very delicate from birth, and the bowels unnaturally costive; it was frequently teased with tenesmus, and sometimes with vomiting. The abdomen became greatly distended; the case was considered to be diseased liver, with *tabes mesenterica*. Symptoms denoting hydrocephalus came on, which continued about three weeks, and the child died suddenly in a convulsive paroxysm. The large intestines were enormously distended with fœculent matter and gas, and all the coats immensely thickened (as seen in the preparation), and there were large scybalæ in the cæcum and colon. The small intestines were also greatly increased in size and thickness, and they contained fœculent matter in a fluid state; there were no signs of inflammation of the mucous coat, but the glands were greatly enlarged.

All the symptoms, and the death of the child were occasioned by a strictured state of the termination of the intestinum rectum, and of the sphincter ani, the external opening being only large enough to admit the end of a small female catheter ; this contraction had in all probability been formed at an early stage of the developement of the fœtus in utero.

The pia mater was highly inflamed ; there was effusion between this membrane and the arachnoid, and there were nearly three ounces of water in the ventricles. All the other viscera were healthy. The uterus is shown in the preparation.

It would be difficult to decide whether the hydrocephalus was congenital, or occasioned by the symptoms which the stricture excited. If timely attention had been paid to the unnatural appearance at the verge of the anus and the symptoms, the aperture might have been dilated, by the employment of different sized bougies, or by dividing the sphincter ani ; and the life of the child saved. I have seen the large intestines of idiots and incurable maniacs immensely thickened and dilated, occasioned by long retention of the fæces.

This is a most remarkable and valuable preparation.

1026 A portion of the transverse arch of the colon, affected with carcinoma.

A man, 46 years of age, had suffered for nearly three years from pain in the abdomen a little below the umbilicus, which frequently caused vomiting, and his bowels were very costive.

He had consulted a number of professional men, but had not derived any benefit from any of the remedies prescribed. The disease gradually increased, his health declined, and about two months previously to his death, he had frequent attacks of vomiting, accompanied with violent pain in the abdomen ; it was with great difficulty that the bowels could be relieved. At last symptoms of enteritis commenced ; he was seized with sickness, and obstinate constipation ; his abdomen became distended, singultus, with stercoraceous vomiting came on, similar to what takes place in intussusception, or in internal strangulated hernia.

The peritoneal coat of the intestines was highly in-

flamed, the small intestines immensely distended with air, and fæculent matter in a fluid state. The cæcum and the colon, to as far as the sigmoid flexure, were of enormous size; this had been occasioned by a stricture of the bowel at this part, which had prevented the fæces from passing through the remaining portions of the large intestines; this readily accounted for the symptoms, and caused the patient's death. The remaining portion of the colon and the rectum were empty and greatly contracted, in consequence of not having been employed for a length of time.

The stricture had been formed by chronic inflammation, caused by schirrous tubercles between the serous and muscular coats, around the whole circle of the intestine, and the mucous coat was greatly thickened and formed into rugæ, which added considerably to diminish the capacity of the tube.

This stricture was the most complete I ever examined, it appeared as if a tight ligature had been applied round the bowel (which appearance is partly shown in the specimen), the aperture was so small as to allow only of the passage of a moderate sized bougie.

There were several carcinomatous tubercles in the mesentery, the thoracic viscera were healthy.

1027 A portion of colon and mesentery. The mucous coat ulcerated, and sloughy; there are also several small medullary tumors in the mesentery.

1028 Schirro-contracted rectum. The man, 74 years of age, when admitted into Cripple-gate Workhouse, was so extremely ill as not to be able to give any description of his case; all he could say, was, that he "felt a great pain in his belly, and that he had not had a motion for 12 days." The abdomen was distended enormously, and felt very dense, but he did not complain on pressure. As there was no appearance of anasarca, and no fluctuation could be felt in the abdomen, I had no doubt that the accumulation was occasioned by air, and fæculent matter in the intestines, from some mechanical obstruction; either an internal strangulated hernia, or a stricture. His pulse was extremely small and intermittent; he complained of excessive pain in

the abdomen; had great difficulty in breathing, and expelled from his stomach an immense quantity of air and fæculent matter; he lived six hours only from the time of his admission. The bowels could not be acted on. On opening the abdomen about a pint of yellowish fluid escaped.

The peritoneum and all its reflections over the viscera were highly inflamed. The accumulation of air was quite surprising; the cæcum and colon were equal in diameter to those of a horse. The transverse arch of the colon had forced up the liver and diaphragm so as to lessen considerably the thoracic cavity, which accounted for the distressing dyspnœa.

The rectum was greatly dilated by hardened fæces. The small intestines contained a considerable quantity of fluid fæculent matter, and the ileo-cæcal opening was immensely wide.

On examining the rectum, a dense stricture was detected, about four inches from the verge of the anus; the stricture was produced by the growth of small carcinomatous tubercles between the serous and the muscular coats, and the caliber of the bowel scarcely admitted the broad end of a blow-pipe; the mucous coat, at the strictured part was not diseased, but formed into rugæ; the cellular coat is very dense, and presents an appearance as if a ligature had been applied around the intestine.

The liver was remarkably small, very firm in texture, and tuberculated; the lungs healthy, the internal coat of the aorta ossified.

It has been said that females are more liable to a schirro-contracted rectum than men: from a comparative table kept at the "Hotel Dieu," this would appear to have been the case in the proportion of 11 to 1.

I have seen five cases of strictured rectum in men.

1029 Intestinum rectum, affected with carcinoma; and medullary sarcoma; a portion of the cæcum was lacerated by an accumulation of fæces, occasioned by a stricture in the rectum.

This is a splendid specimen.

There was an immense quantity of fæculent matter in the abdomen; the cæcum and colon were loaded with fæces, in the form of scybalæ; the cause of this accumulation in the bowels, was found to have

been produced by a stricture in the rectum, and the cæcum was in one part ruptured, which accounted for the escape of some of the contents of the bowels into the cavity of the abdomen; the opening is shown in the preparation.

On examining the rectum, a stricture was detected, about four inches from the verge of the anus; the coats of the bowel, at this part, were immensely thickened by the growth of carcinomatous and medullary tubercles, which commenced in the cellular tissue, and had made their way into the cavity of the bowel by ulcerative absorption, as is seen in the preparation. A part of the cæcum is ruptured.

The substance of the uterus was normal, but the right ovarium was converted into a tumor, the size of a small turnip; its structure was partly schirrous and medullary. The peritoneum and its reflections were highly inflamed.

The liver, particularly the left lobe, was affected with carcinomatous and fungoid tubera; the kidneys were also affected with small tumors of a schirrous density. The mucous coat of the bladder was inflamed.

From a female, 42 years of age, who had never been married; she had been troubled with an obtuse pain in the lower part of the abdomen, nearly two years, and suffered great difficulty in discharging the contents of her bowels, requiring active purgatives to regulate them. The menstrual periods were very irregular, the secretion scanty in quantity, and accompanied with severe pain. The discharges from the intestines were frequently mixed with pus, and sometimes blood, and the odour very offensive.

The patient had been seen by several medical gentlemen. I examined the rectum, and although this was done in the most gentle manner, she complained of great pain.

I soon ascertained that there was a malignant stricture in the intestine, and that the opening was extremely small; the mucous surface was ulcerated, and the cavity of the rectum felt as if filled by a large tumor. Bougies had been tried, which seemed to have aggravated the disease, and they always occasioned con-

siderable pain. It was very evident that this case would terminate unfavorably, all that could be done was to endeavour to act on the bowels by mild aperients and clysters, and to relieve the excruciating pain experienced in voiding motions, by suppositories, and large doses of opium.

About six months previous to her death, great pain was complained of in the situation of the cæcum, and along the course of the transverse arch of the colon, and when pressure was made in the right iliac region, great pain was complained of, and a protuberance of considerable size felt. The patient was also greatly annoyed by dyspepsia and flatulence; the latter when passed alone or during the discharge of fæculent matter, was more distressing than by eructation. The disease after this time began to make rapid progress, fœtid pus and blood passed with the evacuations, and her health became seriously affected; the only comfort she could have, was from the effects of opium and opiate injections.

The tumor in the rectum protruded into the pelvis, towards the inferior part of the rectum, which greatly impeded the discharge of the contents of the bowels, also the flow of urine.

A short time previous to her death, great pain in the back was complained of, also in the stomach, accompanied with tenesmus; the abdomen became greatly enlarged, fever came on, which affected the sensorial functions, and she expired.

1030 Carcinoma in the rectum, uterus and bladder.

The woman, 50 years of age, had suffered nearly two years with this terrible and incurable disease; during the latter part of her life she had great difficulty in voiding urine or fæces; there was a profuse discharge of pus, sometimes mixed with blood, and an ichorous secretion, which smelt offensively, characteristic of this disease. Her health gradually declined, she became greatly emaciated, jaundice came on, and effusion into the abdomen, which finished her existence.

The peritoneum was inflamed, and covered with coagulated lymph; but these appearances were more evident on the serous coat of the pelvic viscera.

The cæcum and its appendix adhered very firmly to the serous covering of the uterus, and its mucous surface presented a melanotic appearance.

The uterus was greatly enlarged, its parietes immensely thickened by carcinoma, the internal surface ulcerated, the cervix destroyed, and the diseased action had extended to the mucous surface of the vagina. The disease had also made its way from the vagina into the urinary bladder, and long growths or vegetations had formed in the bladder, near the meatus urinarius.

The bladder was remarkably small. Fistulous sinuses had likewise been established between the vagina and the strictured portion of the rectum; which appearances are shown in the preparation by pieces of colored glass.

The liver was very small, dense in texture, but presented no signs of malignant disease. Spleen solid. The thoracic viscera healthy.

This is the most genuine specimen of carcinoma in the rectum I ever examined.

What could a Physician or a Surgeon have done in a case like this?

1031 Omentum, with carcinomatous tubercles.

1032 Carcinomatous tubercles, small, in the omentum; from a woman. The lungs were affected with carcinoma, and medullary sarcoma.

1033 A part of the omentum, with various sized carcinomatous tumors between the surfaces, and that portion of the membrane on which the tumors are situated, is semicartilaginous.

This is an unique specimen.

The serous coat of the diaphragm, mesentery, and liver were affected with carcinoma, together with the stomach and pancreas.

1034 The inferior part of the œsophagus and cardiac orifice of the stomach, inverted; the muscular structure of the former shown.

1035 Œsophagus, with a portion of the cardiac orifice of the stomach, affected with carcinoma.

A woman, 70 years of age, had been troubled with dyspeptic symptoms nearly two years, had experienced great pain and uneasiness in the stomach after her meals, and was occasionally distressed with

vomiting. Her health declined, she gradually became emaciated, and looked very sallow.

About six months previous to her death, she could scarcely keep sufficient nourishment in her stomach to preserve life; she frequently vomited a fluid like coffee grounds; and complained of a burning heat in the œsophagus, and scrobiculus cordis. Her bowels were generally constipated,—she appeared to die of inanition.

In the lungs and liver there were a great number of medullary tumors, the ovaria were greatly enlarged by carcinomatous tumors.

The stomach was greatly contracted, but at the superior and posterior part of the small arch, close to the left side of the cardiac orifice, a pouch, or second stomach had been formed, such as I have before noticed, which I believe is the part principally employed in carrying on digestion in these cases.

There was a small quantity of dark-colored fluid in the stomach; its mucous surface was inflamed; and the extremity of the œsophagus and cardiac portion of the stomach were ulcerated; these appearances are exhibited in the preparation.

- 1036 A portion of œsophagus, affected with carcinoma and melanosis. The disease had commenced in the cellular tissue, between the muscular and mucous coats, and caused ulceration of the latter to about the extent of two inches and a half; the loss of structure presented an elliptical figure. There is also an ulcerated opening through all the coats, about half an inch in length, which must have allowed what was swallowed to have passed partly through it, and in all probability occasioned inflammation and sloughing of the cellular tissue connecting the œsophagus, trachea, &c. Some of the absorbent glands were affected with melanosis.

This is a very valuable specimen; the history of the case is not known.

- 1037 A portion of stomach, with the pancreas. The woman, 59 years of age, had been for upwards of two years distressed with dyspepsia, and complained of great pain in the region of the stomach after taking her meals, and had occasional attacks of vomiting. Her health for a few months previous to death,

began to decline, her complexion became sallow, and she could scarcely keep any thing in the stomach; hæmatemesis came on, and she died suddenly.

There were carcinomatous tubera in the liver.

On opening the stomach it was found greatly contracted, and contained some coagulated arterial blood only; after removing the coagulum, it was seen that the coats of the stomach, to a large extent, near the pylorus, had been destroyed by ulceration.

A portion of one side of the pancreas had also been destroyed, and the coats of the splenic artery were laid bare, as indicated in the preparation by a black bristle. The boundary of the ulcerated portion partly adhered to the healthy part of the pancreas; but the remainder presented a ragged appearance, as if it had been detached by the violent vomiting. There were small schirrous tubercles between the muscular and mucous coats, near the diseased part.

This is a very remarkable specimen.

1038 A portion of stomach, affected with carcinoma.

This is the most remarkable preparation of genuine carcinoma of the stomach I ever examined. Nearly one half of the great arch of the stomach is converted into very large schirrous tumors, which had formed between the cellular and mucous coats, and the mucous surface is converted into a morbid structure of great density, resembling verrucæ, or chimney sweeper's cancer.

1039 Pyloric extremity of the stomach, affected with carcinoma; a portion of the duodenum shown.

The disease commenced in the cellular tunic; the liver was also affected with the same disease.

1040 Pyloric extremity of the stomach, with the duodenum. A man, 45 years of age, a labourer, had suffered from gastric affection nearly three years; he experienced great pain after swallowing solid food, in the epigastric region. The liver was greatly enlarged, and when pressure with the hand on examination was employed, pain was excited; there were no signs of icterus; he became greatly emaciated.

For nearly five weeks previous to his decease, he was distressed with a pain at the pit of the stomach and in the right hypochondrium, accompanied with

frequent attacks of vomiting; the bowels became constipated, and could not be relieved by drastic purgatives or clysters.

All the thoracic viscera were healthy, the liver was greatly enlarged, and presented a granulated structure, and there was a small abscess in the substance of the great lobe of the liver near its inferior surface.

The spleen was natural, as was the pancreas. The small arch of the stomach was considerably thickened, as far as the pylorus, by carcinomatous depositions in the cellular media connecting the different tunics, and a great portion of the mucous coat had been destroyed by ulcerative absorption.

There were many schirrous tubercles in the omentum (some of them shown in the preparation), the largest about the size of a marble. About four inches from the commencement of the duodenum, there was a strictured state of this intestine, caused by similar morbid changes to those noticed in the stomach. The diseased state of the pylorus and bowel, satisfactorily accounts for some of the distressing symptoms.

- 1041 A portion of stomach, affected with genuine carcinoma. A boy, 14 years of age, by trade a miller, had been in a delicate state of health from his birth, and during the last eight months of his life, his health was greatly affected. The coats of the pyloric portion of the stomach were immensely condensed by carcinoma; the mucous surface highly inflamed, and in parts ulcerated.

Some of the ribs were affected with the same disease. I never before saw carcinoma in the stomach, in so young a person. Was the disease congenital?

- 1042 Pyloric extremity of the stomach, with a portion of the duodenum. The coats of the stomach were greatly thickened by carcinoma, particularly near the pylorus, and its caliber diminished.

At the commencement of the duodenum, a small opening had been formed by ulceration of its coats (which is shown by a black bristle in the preparation), and a portion of omentum had become adherent to the surface of the intestine, near the ulcerated opening; which prevented the escape of its contents into the cavity of the abdomen. The mucous coat of the duodenum was greatly thickened.

- 1043 Stomach affected with carcinoma, and medullary sarcoma. The inferior part of the stomach was greatly condensed by the production of various carcinomatous and medullary tumors between its coats. The mucous coat is ulcerated, the serous surface greatly thickened, and several of the tubera are seen in the preparation, beneath the serous coat. The pylorus and about three inches of the duodenum, are rendered nearly an inch in thickness by cancerous disease.
- This is a very remarkable specimen.
- 1044 Pyloric extremity of the stomach, with a portion of the duodenum. A man, 50 years of age, had been affected with stomachic disease several years; a few months previous to his death, he complained of a burning heat in the region of the stomach, and could scarcely keep any thing in it; he was constantly thirsty, jaundice supervened, he became emaciated, and appeared to die from inanition.
- The stomach was contracted, it contained only a small quantity of coffee-colored fluid, mixed with mucus; the internal surface was of a darkish color and very vascular. The pylorus was greatly lessened in caliber by medullary tubercles between its coats; the duodenum was inflamed, and nearly the whole of the cuticular lining of the œsophagus was destroyed by the frequent acts of vomiting.
- The liver was hard and granulated; there were a great number of medullary tubercles in the omentum, some of them are preserved in the preparation; the omentum having become partly united to the outer surface of the stomach.
- Most of the large arteries were highly inflamed, and in some medullary matter was deposited between the fibrous and internal coats.
- 1045 Pyloric extremity of the stomach, affected with fungus hæmatodes and carcinoma.
- The serous and muscular coats of the stomach, for about four inches from the pylorus, were immensely thickened by schirrous and fungoid productions, and a portion of omentum adhered firmly to the serous tunic. The malignant tumors had by their growth destroyed the mucous coat, and projected into the stomach; their appearances are well exhibited in the preparation. The pyloric opening very small.

1046 The inferior part of the stomach, with a portion of the duodenum. A man, 40 years of age, robust, and very healthy, whilst unloading a cart with bricks, was suddenly seized with pain in the abdomen, which became extremely severe ; he perspired profusely, and was very sick and faint. Every thing was done for him by his professional attendant, without effect.

The abdomen became distended, and he complained of great pain over its whole surface ; he vomited violently, and perspired profusely ; the breathing was oppressed, pulse very small and quick ; dysuria ensued, with singultus, and he died about twenty four hours from the commencement of the attack.

There was a considerable quantity of air in the abdomen, and fluid which looked like the drinks he had swallowed, such as tea, gruel, &c.

The cause of death was a small ulcerated opening at the commencement of the duodenum, only large enough to admit the point of a moderate sized bougie.

The mucous coat of the duodenum was considerably thickened, as was the serous coat, and lymph which had become organised, was deposited on it ; this leads me to suppose that some portion of the omentum or the mesentery had adhered to the aperture, and had been disunited by the violent efforts of vomiting. From the appearance of the opening, I should say that the ulcerative action had long ceased, and that a temporary cure had been effected by some part in the abdomen closing the aperture, an instance of which I shall have to describe in the history of the following preparation.

1047 The inferior portion of the stomach, and a part of the duodenum.

All the coats of the stomach greatly thickened, particularly the serous and muscular ; the mucous coat was also thickened, and appeared in some parts, particularly near the pylorus, of a blackish color.

The pylorus was formed into a small pouch, which had been produced by a stricture at the commencement of the duodenum ; the aperture only admitting a small piece of the quill of a Porcupine, as seen in the preparation. The duodenum very capacious, the mucous coat thickened.

COMPARATIVE ANATOMY.—*Alimentary Canal*.—*Normal*.

- 1048 Ileum, cæcum, &c. of the *Cercopithecus Seniculus*, or Howling Monkey. The appendix cæci in this very curious animal is wide, long, and its extremity obtuse.
- 1049 Duodenum of a Mongoz, inverted. The villi very short, and delicate. There is scarcely any distinction between the small and large intestines in this animal, except the cæcum, which is very small, but the appendix long, large, and curled.
- 1050 Stomach, duodenum, gall-bladder, pancreas, and spleen of the *Erinaceus Europæus*, or Hedge Hog, injected with size and vermillion. The pancreas is extensive, and the spleen large in this animal.
- 1051 Duodenum of the *Lutra Vulgaris*, or Otter, showing the villi belonging to the internal coat, which are extremely numerous, short, and very minute, resembling those in the duodenum of a Dog.
- 1052 Pyloric extremity of the stomach of a Dog, dried, and preserved in spirit of turpentine.
- 1053 A portion of the duodenum of a Dog, the villous structure is shown.
- 1054 Ileum and cæcum of a Dog, dried and preserved in spirit of turpentine, the valve shown.
- 1055 Ileum and cæcum of a Dog, dried and preserved in spirit of turpentine, the valve of *Tulpius* is shown.
- 1056 Ileum and cæcum of a Dog, dried and preserved in spirit of turpentine, the valve shown.
- 1057 Ileum and cæcum of a Cat, inverted; the villi of the ileum exhibited, also the *valvula coli*.
- 1058 Ileum and cæcum of a Cat, injected; the valve shown.
- 1059 Stomach of a *Phoca* or Seal, injected and inverted, showing a large mucous gland, situated about two inches from the pylorus.
- 1060 Ileum and cæcum of a *Phoca* or Seal, inverted. The cæcum in this animal is very small like that of the Dog; it terminates in the rectum.
- 1061 Stomach of a Virginian Opossum, inverted. The internal surface of the œsophagus presents an appearance like the *valvulæ conniventes* in the human duodenum. The cardiac and pyloric apertures are not more than two inches and a half apart. The mucous glands of the stomach are very large and

numerous, and there is a zone of glands at the commencement of the duodenum, similar to that seen at the termination of the œsophagus of birds,—the *bulbus glandulosus*.

The mucous glands in the duodenum are also very large.

- 1062 Ileum and cæcum of the *Didelphis Virginiana*, or Opossum, inverted. The intestines of this animal are beautifully delicate, the villi of the internal coat, both in the small and large intestines, are very small and projecting. The cæcum forms a very long, wide, blunt-pointed process, not unlike a diverticulum, occasionally seen in the small intestines of the human subject.

The *glandulæ aggregatæ* and *solitariae* are very numerous in the small and large intestines.

- 1063 Stomach of a *Myoxus Avellanarius*, or Dormouse, inverted, to show a zone of glands at the cardiac orifice, resembling the gastric glands of birds. This structure was first discovered by Dr. MACARTNEY.

- 1064 Stomach of a Rat, injected and inverted, showing the cuticular and mucous division of its internal coat.

- 1065 Ileum and cæcum of a Rat, inflated, and dried. The cæcum is nearly as large as the stomach of this animal.

- 1066 Stomach of a young Rabbit, minutely injected. The mucous coat of the stomach and duodenum is shown.

- 1067 Two portions of the cæcum of a Rabbit, minutely injected with size and vermillion.

The valves resemble the *valvulæ conniventes* in the human subject. The internal coat is delicately reticulated, and the villi are very numerous, and appear like minute mucous glands.

- 1068 Spiral valve of the cæcum of a Rabbit, minutely injected with size and vermillion.

- 1069 Spiral valve, &c. of a Rabbit, minutely injected, also the *glandulæ aggregatæ*.

A beautiful specimen.

- 1070 Cæcum of the Marmot, minutely injected with size and vermillion.

In this animal the cæcum is large and sacculated.

- 1071 Ileum and large intestine of the *Myrmecophaga Jubata*, or great Ant-eater.

The internal coat of the ileum is delicately reticulated.

The valvula coli very capacious, and where the ileum terminates there is an arrangement of muscular fibres of great size, which appear calculated to constrict the intestine at this part, and give support to the valve.

All the coats of the large intestine are very thick, and dense in structure. The fibres belonging to the muscular coat are extremely large, especially those arranged in the longitudinal direction; they are shown in the preparation

The mucous coat is formed into large irregular rugæ, which appearance extended to the verge of the anus.

As there were no signs of a regular cæcum or appendix in this very curious animal, it must be considered to have only one large intestine.

See skeleton of the *Myrmecophaga Jubata*. The tongue and stomach are in the Museum of the Royal College of Surgeons.

- 1072 Ileum, cæcum, appendix, and part of the colon of the *Myrmecophaga Aculeata*. The appendix cæci in this singular Ant-eater is extremely short and small.
- 1073 A portion of the œsophagus of a Horse, showing the cuticular and muscular coats; the latter is very thick.
- 1074 Stomachs of the Pigmy Deer, injected with size and vermillion. The internal structure exhibited, also the spleen.
- 1075 Stomachs of the Pigmy Deer, the duodenum inverted, showing the arrangement of the villous surface of the 1st, 2nd, and 3rd stomach, and the mucous coat of the 4th.
- 1076 Stomachs of a Kid (taken from the Uterus), full of the natural secretion. The spleen is shown, and the arteries belonging to the liver and pancreas are unravelled.
- 1077 Stomachs of a young Calf, minutely injected, and dried; all the valves are shown. The preparation is preserved in spirit of turpentine.
This is a beautiful specimen.
- 1078 CEsophagus, stomach, duodenum, spleen, and pancreas of a *Delphinus*, or Porpoise.
The stomachs are extremely muscular, the spleen very small, the vessels of the pancreas unravelled.

- The œsophagus is wide, and the cuticular lining very dense in structure; it lines the first stomach, which is formed into rugæ of considerable size. The second stomach is much larger than the first, it has a mucous coat of great thickness, which is plicated longitudinally.
- 1079 Gizzard, duodenum, and spleen of a Sparrow Hawk. The zone of mucous glands shown.
- 1080 Tongue, gizzard, &c. of a young Nisus, or Sparrow-Hawk; the bulbus glandulosus minutely injected.
- 1081 Gizzard of a Frugilegus, or Rook. The bulbus glandulosus shown; and the muscular structure dissected.
- 1082 Gizzard of a Pheasant. The bulbus glandulosus shown.
- 1083 Head, œsophagus, crop, gizzard, and intestines of a young Chicken, minutely injected.
- 1084 A portion of the duodenum of an African Ostrich, injected with size and vermillion; the valvulæ conniventes shown, which are very large in this bird.
- 1085 Two portions of the duodenum of an African Ostrich. The villous coat is very beautiful. One portion is injected with size and vermillion.
- 1086 Rectum of a New Holland Emu, with the cloaca. The internal coat villous, the mucous glands large, and numerous. The ureters and seminal ducts terminate in the rectum.
- 1087 Œsophagus of a New Holland Cassowary. The bulbus glandulosus shown.
- 1088 Œsophagus and stomach of a Stellaris, or Bittern, injected with size and vermillion; the zone of mucous glands shown.
- 1089 Œsophagus, stomach, and intestines of the Phœnicopterus Ruber, or Flamingo. The stomach of this bird is extremely small, and very delicate in structure, the internal coat mucous. The intestines very small, and without a cæcum. The cloaca is shown in the preparation. See the skeleton of the Flamingo.
- 1090 Gizzard of a Swan. The bulbus glandulosus and duodenum minutely injected.
- 1091 Two portions of the intestine of a large Tortoise, injected.

- 1092 Œsophagus of a Turtle, inverted, to show the innumerable pointed processes, all directed downwards.
- 1093 A portion of the intestine of a large Turtle, with a part of the mesentery, injected. The mesentery is quite transparent, the blood-vessels are very large, and some of the lacteals are seen in the preparation. The coats of the intestines are extremely thick, especially the muscular, the mucous coat rather thick, and formed into longitudinal plicæ, not very delicate in structure. A portion of the internal tunic is reflected from the muscular.
- 1094 Two portions of intestine of a Turtle, in one the mucous membrane is reticulated; in the other it is formed into longitudinal plicæ.
- 1095 Stomach of a young Alligator. The external surface of the stomach resembles the gizzard of a granivorous bird; it is funnel-shaped; the internal coat is reticulated in a longitudinal direction, and terminates in the pylorus. About three quarters of an inch from the cardiac orifice, there is a small round aperture, which might be considered the pylorus, but from this part there projects a small sac, with all the natural structure of the stomach, like a second ventriculus; this appears placed at the extremity of the small stomach. The villi of the internal coat of the duodenum are numerous, short, and the surface is reticulated.
- 1096 A portion of the duodenum of a Crocodile, with the mesentery. The blood vessels belonging to the mesentery are very large, and the lacteals very distinct. All the coats of the intestine are extremely thick, more especially the muscular, almost resembling a portion of the human stomach affected with carcinoma. The internal coat is beautifully reticulated, and arranged into cells like a honey-comb.
- 1097 A portion of the intestine of a Crocodile. On dissecting this reptile, there did not appear any signs of a cæcum, but at about the situation where the intestines divide into small and large, there was a considerable diminution in caliber, to the extent of half an inch (without any appearance of disease), forming the resemblance of a strictured part, or contraction. This seemed to be produced naturally by two of the arteries and veins of the mesentery, with

portions of this membrane surrounding the intestine, in the same manner that I have seen the constriction formed in internal hernia in the human subject.

I think it would be very difficult to give a correct opinion respecting the function of the portion of bowel above described. Perhaps it is calculated to prevent the nutritious part of the food passing too quickly from the small into the large intestines, and allows the lacteals to take up a larger quantity of chyle?

1098 Stomach and duodenum of the Iguana. The œsophagus is very capacious. The structure of the stomach is very delicate and thin, its serous covering presents a glistening appearance of a bluish color, which has been called tendinous.

The cardiac orifice is about an inch and a half from the pyloric. On the internal surface of the small arch of the stomach, the mucous coat is formed into four broad and long laminæ, and the stomach at this point dilates into a roundish sac, which extends to the pylorus, and may be considered as a second stomach.

The duodenum is very large, and the mucous coat plicated in the longitudinal direction; the villi delicate.

1099 Duodenum of an Iguana, minutely injected with size and vermillion; the internal coat laminated in the longitudinal direction.

1100 Œsophagus, stomach, and part of the duodenum of a Boa Constrictor. The œsophagus is very capacious in this reptile, and its internal surface is plicated longitudinally, as is also the mucous coat of the stomach.

1101 Duodenum of a Boa Constrictor. The external and internal coats are remarkably delicate in structure, there did not appear any signs of a muscular coat. The internal coat presents numerous small villi, which do not project far from the surface of the intestine. There were several tape worms found in the duodenum. The heads of two of them adhere to the intestine. There is something singular in the teniæ found in the Boa Constrictor, the head is much larger than in any others I have examined, and there are two pointed processes near its mouth,

similar to those seen in the larvæ of the *Æstrus Equi*, or Gad-fly, by which the latter perforate the cuticular coat of the stomach, and hold firmly.

1102 Two portions of the intestine of a Boa Constrictor; one part shows the villous arrangement, the other the reticulated.

1103 The pyloric extremity of the stomach of the Accipenser, or Sturgeon, with the air-bladder and duodenum. The communication with the air-bladder is denoted by a piece of white glass. The silvery appearance of the air-bladder is shown, also the spiral valve in the duodenum.

This is a beautiful preparation.

1104 The pyloric extremity of the stomach of the Accipenser, or Sturgeon, with the duodenum.

The appendices pyloricæ in this fish, are consolidated into a glandular mass; and a number of wide ducts are formed, which terminate in the duodenum. The spleen is divided into three long portions, and is situated near the pancreas. The whole of the intestines are extremely thick, the internal coat is elegantly reticulated (as in the Crocodile), and the same arrangement of tissue is continued along the course of the tubes belonging to the pancreas.

1105 A portion of the stomach, duodenum, the pancreatic cæca, and gall-bladder of the Morrhua, or Cod Fish.

1106 Stomach, duodenum, &c. injected.

1107 A portion of rectum, and verge of the anus, of the *Lupus Marinus*, or Sea Wolf. The kidnies, urinary bladder, &c. shown.

The muscles to the intestinum rectum are extremely large, especially those in the longitudinal direction.

The internal coat, at the base, is reticulated, and formed into long projecting processes, or plicæ, and their edges present a fringed appearance. The verge of the anus is very capacious, and in the dead fish the rectum protrudes to a considerable extent, presenting the appearance of a prolapsus ani; a similar fact I have noticed in the *Lophius Piscatorius*, Sea Devil, Frog Fish, or Angler. At the extremity of the rectum, the meatus urinarius is seen in the preparation, also the penis, which is extremely small.

1108 A portion of duodenum of the *Lupus Marinus*. The cellular coat is reflected from the muscular, and the

internal tunic shown. The muscular coat is more evident in the small intestines than in the large, it is slightly reticulated at its base, and is then formed into long projecting laminae or processes, pursuing a zig zag course longitudinally.

- 1109 Gizzard of the *Sirus Marinus*, showing the zone of mucous glands at the inferior part of the œsophagus. There is in the same bottle a tenia, which was found in the duodenum.

COMPARATIVE ANATOMY.—*Alimentary Canal.*—*Morbid.*

- 1110 Stomach and duodenum of a Dog, inverted, arteries injected. The animal was poisoned by taking half a drachm of arsenic. About two hours after swallowing the poison sickness commenced, and the poor animal seemed in agonizing pain; in eight hours the vomiting moderated, a violent purging ensued, with strong convulsions, and he died twelve hours from the commencement of the symptoms.

The mucous coat of the inferior part of the stomach appeared of a darkish color, as if the arsenic had arrested the circulation of the blood in the vessels; this is seen in the preparation. And this conjecture was made more feasible, from the fact of the minute injection having filled all the arteries of the upper surface of the stomach and duodenum, but not the least sign of vascularity could be detected in the parts which had been acted on by the arsenic. The mucous glands near the pylorus are seen, also the villi of the duodenum; this is an interesting preparation.

- 1111 The stomach of a *Hyæna*, inverted. A considerable portion of the large end of the stomach destroyed by the gastric juice; the ragged appearance of the coats is shown.

- 1112 A portion of the small intestine of a Cat, with the omentum, injected with size and vermillion.

The animal had been in a bad state of health nearly twelve months, and was greatly emaciated; the bowels were much disordered.

Inspection. Various sized medullary tumors were found beneath the serous coat of the intestines, and in the mesentery. At the inferior part of the duo-

denum several of the medullary tumors had aggregated, and formed a large mass, which during its growth had surrounded this intestine, and lessened its caliber, and the mucous and muscular coats are to a considerable extent destroyed by ulceration. These appearances are well shown in the preparation.

1113 A portion of duodenum and mesentery of a Cat, injected; there are several carcinomatous tumors beneath the serous coat.

1114 Omentum of a Cat, with a great number of various sized carcinomatous tumors in its texture.
A beautiful specimen.

The lungs and liver were affected with the same disease; the creature was greatly emaciated.

1115 A portion of the transverse arch of the colon of a Horse; the mucous coat highly inflamed, and partly sphacelated; the peritoneum was also inflamed. The horse had been fed too highly.

1116 Gizzard of a Hen, diseased. The commencement of the duodenum having been completely obliterated, the gizzard and crop became enormously distended with the food and pebbles which had been swallowed, the consequent irritation gave rise to inflammation, sphacelation, and the death of the bird.

LIVER.

Healthy and Morbid.

1117 A portion of healthy liver, minutely injected. The minute arteries beneath the serous membrane shown; a portion of the latter is reflected.

1118 Two portions of liver, arteries minutely injected.

1119 A portion of liver, minutely injected; dried and preserved in spirit of turpentine.

1120 A portion of liver, inflamed.

1121 A portion of liver, and diaphragm. The liver adheres very firmly to the diaphragm; the serous membrane covering the thoracic surface of the diaphragm is thickly coated with organised lymph.

The patient had malignant disease of the lungs, liver, &c.

1122 Liver, its structure consolidated by chronic inflammation; serous covering thickened.

From a man who died of ascites.

- 1123 Liver, consolidated by chronic inflammation and lymph; the serous covering thickened.
- 1124 Liver, consolidated by chronic inflammation, and effusion of lymph. A man 49 years of age, who had lived very irregularly, and died of ascites. There was a large quantity of water in the abdomen, the spleen was very large. The serous covering of the liver was greatly condensed, and thickly covered with organised lymph, and there were long broad adhesions between this surface and the peritoneum, which are preserved in the preparation, with a part of the abdominal parietes.
- 1125 A portion of liver, structure dense, from the effects of chronic inflammation; the gall-bladder greatly thickened, and its internal surface of a deep green colour, from a morbid secretion. Taken from a woman who died of ascites.
- 1126 Liver, inflamed, and granulated. From a woman, a dram-drinker, who died of ascites.
- 1127 Two portions of liver. The patient, a young woman, died of phthisis pulmonalis; she was jaundiced. A gin drinker.
- 1128 A section of liver; structure granulated. A dram-drinker.
- 1129 A portion of liver, congested, showing what has been denominated the "Nutmeg Liver." The patient died of ascites.
- 1130 A portion of liver, and diaphragm. The natural structure of the liver nearly destroyed by the effects of inflammation, and granular depositions. There was firm adhesion between the serous covering of the diaphragm, and that covering the convex surface of the liver.
- 1131 A portion of liver, granulated; the serous covering greatly thickened by organised lymph, and there are long processes of lymph formed into broad bands, which were adherent to the under surface of the diaphragm. From a man who had lived very irregularly. There was a great quantity of water in the abdomen, the liver was very large, as was also the spleen.
- 1132 A portion of liver, with the gall-bladder and the biliary ducts, and part of the pancreas and duodenum. A man, 50 years of age, had shown symptoms of organic disease in the liver for some time

previous to his death ; his countenance was sallow, and his digestive organs were greatly disordered.

About twenty-four hours previous to his dissolution, he was suddenly attacked with vomiting, and intestinal hæmorrhage, which could not be suppressed.

The thoracic viscera were healthy ; the semilunar valves were slightly thickened by ossific depositions at their base.

The liver was remarkably large and granulated, its structure very dense, and the veins were gorged with blood ; but there were no signs of bile in the ducts, or *pori biliarii*. The gall-bladder was greatly thickened, it contained inspissated bile, resembling dried black currants, and the ductus cysticus and communis choledochus were obstructed by the same morbid secretion.

The spleen was very large. The mucous coat of the small intestines was surcharged with blood, and the mucous glands were very distinct, but not much enlarged ; the kidneys were healthy, but they presented the lobulated arrangement seen in the fœtus.

1133 Liver, structure nearly destroyed by lymph, and effusion of bile ; it was granulated ; the gall-bladder was filled with black viscid secretion ; the spleen very large, and dense in structure.

From a man, 49 years of age, who died of ascites and jaundice.

1134 A portion of diseased liver.

From a woman, 50 years of age, who had been afflicted with diseased liver for many years ; she became greatly emaciated, and a few months previous to her death icterus came on ; the urine and fæces were pale-colored, and ultimately the brain became affected.

She had lived very abstemiously. The liver was immensely enlarged ; externally it presented a greenish color, and appeared granulated ; its substance was very solid, it felt soapy, and all the natural structure was nearly destroyed by lymph and biliary effusion, giving it a mottled green and white hue.

The gall-bladder was quite empty, the ductus cysticus, hepaticus and communis choledochus were perfectly healthy. The spleen was large, and firm in texture ; pancreas natural.

The lungs and heart normal. The membranes of the

brain, as well as its structure, were tinged with bile, and there was a considerable quantity of water in the ventricles, of a deep yellow color. I think it very probable, that the bilious matter having been taken into the circulating system by the absorbents, caused the cerebral affection; and I am induced to form this opinion from having seen a case of jaundice in a young girl, which came on suddenly from her having been greatly alarmed; delirium supervened, succeeded by convulsions, which caused the death of the patient in two days.

- 1135 A portion of liver, injected. The patient, a woman, addicted to dram-drinking; she died of ascites.

The natural structure is nearly destroyed by chronic inflammation, and small tubercles, and scarcely any signs of blood vessels or biliary ducts remain.

- 1136 A portion of liver. The patient died of ascites.

The liver was of an immense magnitude, and granulated; the gall-bladder filled with green bile, spleen large and granulated.

I have frequently found the kidneys in these cases similarly affected, which will be noticed in the description of Diseased Urinary Organs.

- 1137 A portion of liver. From a determined gin-drinker. The liver was of immense size, of a pale white color, and felt soapy; the gall-bladder contained an albuminous fluid, not tinged with bile.

- 1138 A portion of liver infiltrated by lymph, and bilious secretion, structure soapy. The spleen large. The patient died of ascites and icterus.

- 1139 A section of liver, injected. The serous surface is greatly thickened, and an adventitious membrane has formed upon it, which does not adhere very firmly, it is semicartilaginous. There are scarcely any signs of vascularity; the structure is very dense, the result of chronic inflammation, and depositions of lymph, and hardly any of the natural structure is visible.

In some parts of the vena cava, there were osseous deposits of irregular form (not phlebolites), which did not adhere to the internal surface. They are shown in the preparation.

Sections of the liver, and its external surface, presented that nodulated appearance, which Mr. ABERNETHY has denominated "the hob-nailed liver,"—cirrhosis.

This morbid appearance is occasioned by atrophy of the lobular structure of the liver, and is termed cirrhosis. The gall-bladder was nearly empty; the spleen very large, structure solid, capsule semi-cartilaginous.

The patient was a man, 60 years of age, who had lived very intemperately for many years, became dropsical, and was tapped several times; a few months previous to his death, black jaundice came on.

1140 A small portion of liver, showing cirrhosis. From an old woman, who died from the effects of ascites.

1141 A section of a liver, affected with cirrhosis. From a man who had lived freely; ascites came on, followed by jaundice, of which he died.

1142 A small portion of liver, affected with cirrhosis. From a man who died of ascites. The liver and spleen greatly enlarged.

1143 Two portions of liver, granulated; this disease is denominated cirrhosis.

From a man 58 years of age, he had jaundice and ascites; spleen very large.

1144 A portion of liver, with the gall-bladder. The liver was rendered very solid by chronic inflammation, and depositions of lymph, in a granular form.

The gall-bladder was filled with a black-colored viscid secretion, and was very large; the contents were pressed out, and then filled with wax injection.

This person was a dram-drinker, and died from the effects of jaundice and ascites.

1145 A portion of liver. The biliary ducts surcharged with bile. The patient died of ascites.

1146 A portion of liver, showing the effects of an abscess. Hepatitis is a disease not often seen in England.

1147 A section of liver. The liver was remarkably small, and very solid in texture; the external surface presented an irregular tuberculated appearance, and its whole substance was of a mottled greenish white color. The serous coat was not much thickened, but it was thickly beset with very small serous cysts, not hydatids.

A section of the liver showed no trace of its natural structure, it seemed composed of masses of organised lymph, and bilious matter.

The gall-bladder was filled with a viscid green-colored secretion.

- 1148 A portion of liver; its natural structure nearly destroyed by very small calcareous deposits of a granular figure; the cellular tissue of a greenish color.

A man, 40 years of age, by trade a Publican, had lived very intemperately. For nearly two years previous to his death, he had shown all the signs of diseased liver; jaundice came on, which continued for several months, and was followed by ascites; subsequently his brain became affected.

There was a considerable quantity of water in the abdomen; firm adhesion had been effected between the peritoneum and the serous covering of both lobes of the liver, and all the intestines were agglutinated by organised lymph. The transverse arch of the colon adhered firmly to the under surface of the liver, and the biliary ducts and pancreas were so thickly covered by lymph, and adhered so firmly, that they could only be detached by dissection.

The gall-bladder contained only a little, thick, green-colored bile; the pancreas not diseased; the kidneys granulated.

- 1149 Liver and gall-bladder, &c. The liver of a pale color, and granulated. There were a great number of large chalky concretions in its substance; two of them, about the size of walnuts, are seen in the preparation.

The gall-bladder very small, the coats dense, and there were several calculi in it; the cystic duct obliterated.

The history of this case is not known. I have seen similar concretions in the liver in gouty subjects.

- 1150 A portion of liver, with an osseous cyst about the size of a walnut, which contained a chalky substance; it was situated near the surface of the liver, and had occasioned a thickening of the serous covering.

- 1151 A portion of liver, with a deposition of osseous matter of considerable size near its surface, which caused a thickened state of the serous coat.

The history of this case is not known. I have seen similar morbid appearances in the liver of a sheep,

occasioned by the cyst of an hydatid ; which I shall have occasion to describe.

1152 A portion of liver, with a dense osseous cyst near its surface, containing a shrivelled hydatid.

1153 Hydatids, with an osseous cyst ; several of them were dead, from having been deprived of their natural nutriment ; the cyst was separated from the liver to show its density.

Taken from a woman who died from the effects of jaundice and ascites.

Some of the hydatids contain young ones.

1154 A portion of liver, with an hydatid in its substance near the surface of the liver ; the cyst dense.

The liver was inflamed, and the gall-bladder filled with green-colored viscid bile.

The child from whom it was taken, about two years of age, died of hydrocephalus, the symptoms of which had existed from birth.

The membranes of the brain were inflamed, and there was effusion of water beneath them ; the convolutions were flattened and soft ; there was a considerable quantity of water in the ventricles.

The effusion into the brain was probably congenital, as was the formation of the hydatid.

1155 A portion of the right lobe of the liver, occupied by an innumerable quantity of various sized hydatids. From a woman, 45 years of age, whose mamma had been removed.

About six months after the operation, the disease recurred in the cicatrix, and beneath the surrounding integuments ; sloughing and ulceration spread and laid waste the skin to a considerable extent, and a fungous growth was produced, which frequently bled so profusely as to threaten her life.

She suffered very severely ; the axillary glands enlarged, and her health gradually declined ; she was excessively nervous, and irritative fever supervened, which soon put an end to her sufferings.

The disease in the axillary glands was strictly carcinomatous ; there were a great number of medullary tumors in the lungs.

The liver was very large, its structure dense, and color reddish white, but it was not very vascular. At the posterior and inferior part of the right lobe and near its edge there was a nodulated en-

largement on the convex and concave surfaces, resembling a number of small tumors; and the serous covering was semicartilaginous.

On reflecting the outer surface of the tumor, it was found to be formed by hydatids, many of them dead. There were several medullary tumors in the left lobe of the liver; the gall-bladder and spleen were healthy.

This is the only instance I have met with, of hydatids in connection with malignant disease; the presence of hydatids I consider an accidental occurrence, and not the cause of the diseases. This perhaps would be doubted by DR. BARON, who imagines that hydatids produce most of the morbid growths.

1156 A portion of liver, tuberculated; the serous coat greatly thickened by chronic inflammation, and long bands of adhesion had formed between this surface and the peritoneum, as shown in the preparation. The spleen was large, and firm in texture.

There was a considerable quantity of water in the abdomen. There were scrofulous tubercles in the lungs. From a man, 40 years of age.

1157 A portion of diseased liver. The liver was greatly enlarged, and extended downwards to a line with the spines of the ilia. The serous surface was thickened, and there were an immense number of small vesicles on it, like small hydatids; it was nodulated, as in cirrhosis.

The structure of the liver was remarkably soft, of a pale yellow color, and nearly filled with small white scrofulous tubercles. A portion of omentum adhered to the external surface of the liver, as is seen in the preparation. The gall-bladder was empty and contracted, as were all the biliary ducts. The spleen was very large, and dense in structure; its capsule thickened, and there were the same kind of vesicles on it as were found on the surface of the liver. The pancreas was healthy.

This preparation will be described in the history of Morbid Spleens.

The mucous surface of all the intestines was extremely vascular, and the mucous glands of the ileum were

inflamed, and partly ulcerated. In both sides of the chest, there was a considerable quantity of water, and in some parts the pleuræ were adherent. There were a great number of miliary tubercles in the lungs, also several small abscesses, and some portions of the lungs were hepatised.

The internal surface of the bronchi and trachea was greatly inflamed, in some parts ulcerated. There were three ounces of water in the pericardium, and the serous covering of the heart was inflamed; the heart was very small, but its structure natural.

The whole of the internal coat of the aorta was semi-cartilaginous, and in some portions it was detached from the fibrous coat. There was a small aneurism at the inferior part of the arch, near the origin of the left subclavian, which has been described in the history of Aneurisms.

From a woman of very diminutive size, 38 years of age, who had been afflicted with symptoms denoting disease of the liver; she had been attended by several able Physicians. Jaundice came on, which was succeeded by ascites, and œdema of the lower extremities, under which she died.

1158 A small portion of liver. The patient, a woman, 45 years of age, of a strumous diathesis, had suffered for several years from diseased liver, which ultimately occasioned ascites, of which she died. The liver was very large, and extremely soft in texture, of a pale whitish color, and seemed converted into small scrofulous tubercles. There were also similar morbid appearances in the spleen and lungs.

1159 Liver, minutely injected. The liver was nearly filled with large scrofulous tubercles; the caseous matter is not colored by the injection. I have frequently attempted to inject scrofulous tubercles, but never succeeded.

1160 A portion of liver, natural structure nearly destroyed by scrofulous matter. The patient died of phthisis pulmonalis.

1161 A piece of liver, structure nearly destroyed by lymph and scrofulous deposits; color white. Gall-bladder empty. She died of phthisis pulmonalis.

The liver projected considerably below the ribs, and from having worn stays too tightly laced, several

indentations were made by the ribs against the convex surface of that organ; similar facts I have frequently noticed.

- 1162 Liver, affected with genuine carcinoma. The lungs, &c. of this patient were affected with the same disease.

- 1163 Liver, affected with carcinoma. The patient died of ascites.

- 1164 Liver, affected with carcinoma. The liver was nearly filled with various sized tubera; some very large, as may be seen in the preparation. The external surface presented the appearance of a liver affected with medullary sarcoma, and the arteries belonging to the serous covering were very numerous.

On making sections of the liver, the structure was nearly as dense as carcinoma.

The patient, a man, 35 years of age, became dropsical, this was succeeded by jaundice.

- 1165 Two portions of liver. The liver was of immense magnitude, and scarcely a vestige of its natural structure was visible, the substance having become carcinomatous. In some parts of its texture, there was a greenish color, which I suppose to have been produced by effusion of bile.

The lungs were affected with the same disease. From a woman 60 years of age.

- 1166 A portion of liver, affected with carcinoma. From a woman, 60 years of age, who had suffered from cancer in the mamma nearly four years; the integuments sloughed, and a cauliflower excrescence formed, which bled freely; the axillary glands became greatly enlarged with the same disease, and there were schirrous tumors above the clavicle; her health declined, icterus ensued, her arm became œdematous, and she died.

The pleuræ were greatly thickened by coagulated lymph, the lungs were partly hepatised, but there were no signs of cancerous tubercles. There were several schirrous tumors in the liver.

The sternum was affected with carcinoma; this specimen, with the diseased breast, will be described. The history and dissection are published in the Royal Medico-Chirurgical Transactions, Volume 9th.

- 1167 Carcinoma in the liver, beautifully injected.

- 1168 Liver, affected with carcinoma, minutely injected.
- 1169 Liver, affected with genuine carcinoma. The patient, a woman, 64 years of age; one of the mammæ had been affected with carcinoma for several years; ascites came on, succeeded by black jaundice. Nearly the whole of the structure of the liver was filled with carcinomatous formations of various sizes, the rest was of a palish white color; the gall-bladder shrivelled. All the other viscera normal.
- 1170 Two portions of liver affected with carcinoma, injected. From a woman, 64 years of age; she had ascites and jaundice. The liver was nearly destroyed by carcinomatous tumors; the gall-bladder contained viscid green-colored secretion; the pancreas was healthy, the ovaria affected with carcinoma.
- 1171 A portion of liver, injected, showing gelatiniform carcinoma. The liver was of immense magnitude; the patient had ascites and jaundice. I have seen this disease in the mamma, as well as in tumors.
- 1172 Liver, affected with carcinoma. The patient, a woman, died of medullary sarcoma in the uterus and rectum.
- 1173 Two portions of liver, showing carcinoma. The liver was injected.
- 1174 Two portions of liver, affected with genuine carcinoma; there were schirrous tumors in the omentum. From a woman 59 years of age; she died of ascites and icterus.
- 1175 Two portions of liver, injected, showing carcinoma. The principal part of the liver was affected with the disease; the external appearance presented medullary sarcoma, with central depressions on the serous covering. The patient, a woman, 60 years of age, died of ascites.
- 1176 Two portions of liver, affected with carcinoma. The natural structure of the liver was nearly destroyed by these morbid productions; the rest of the liver was pale-colored, the gall-bladder thickened and empty. The patient was a woman, 64 years of age, whose mamma was affected with carcinoma.
- 1177 Three portions of liver, affected with carcinoma. The

remainder of the liver was of a deep green color, from the effusion of bile into the cellular media, occasioned by obstruction of the hepatic duct ; there were calculi in the gall-bladder, which had obstructed the cystic duct. The patient, a man, 59 years of age, died of ascites, and what is termed the "black jaundice." The spleen was greatly enlarged.

1178 Liver, affected with carcinoma, minutely injected. This specimen was preserved 24 years ago.

1179 Liver, affected with carcinoma. The tumors are small, but possess all the characteristic structure of schirrus. The lungs were also affected.

1180 Liver affected with carcinoma ; the serous coat greatly thickened, and of a brownish color.

The liver contained a great number of tubera, similar to the one shown in the preparation, and the rest of the liver was extremely dense in structure. The gall-bladder was empty and shrivelled. The spleen large. From a woman 60 years of age, who had ascites and jaundice.

1181 A portion of liver, showing two carcinomatous tumors.

1182 Two portions of liver affected with carcinoma, &c. From a child seven months old ; from its birth an enlargement was felt in the abdomen, which increased gradually, and ultimately became of an enormous size ; the child had a teasing cough, and great difficulty of breathing ; it was not emaciated ; it died suddenly. The patient had been seen by several professional gentlemen ; some imagined the liver was enlarged, others considered it a large tumor, or diseased mesenteric glands.

There was a considerable quantity of water in the abdomen, the liver was of enormous magnitude, and seemed to occupy nearly the whole of the abdomen. Its structure appeared to be wholly composed of medullary and carcinomatous tumors, some of them being distinct, others aggregated ; and the caliber of blood vessels and biliary ducts was greatly diminished by the morbid products.

The gall-bladder contained a small quantity of pale-colored bile ; the spleen was very large, but not diseased. All the other abdominal viscera were healthy.

The lungs were loaded with blood and sero-purulent infiltration, and in some portions hepatitis had taken place. The pleura costalis on the right side was highly inflamed, and beneath it at the superior part of the chest, a tumor was detected, resting on the first four ribs near their articulation with the vertebræ. The tumor with its pleuritic covering was removed, and on making a section, it was found to consist of medullary and fungoid matter, and portions of the first three ribs, upon which it had rested; the bones were partly absorbed. It is my opinion that the disease had its origin during the development of the fœtus in utero; as I believe have all malignant and scrofulous diseases.

183 A portion of liver affected with carcinoma. From a woman 60 years of age, her mamma was affected with the same disease.

184 Two portions of liver affected with carcinoma. The external surface of the liver was thickly coated with organised lymph.

The structure was very dense, and converted into schirrous tumors; the cellular tissue thickened, and its color green, from bile having been effused; this is shown in the preparation. The gall-bladder was empty, the hepatic duct and the communis choledochus obstructed with viscid secretion. The spleen was very large.

There was a great quantity of water in the abdomen. From a man 60 years of age, who had been long afflicted with diseased liver and jaundice.

185 Liver affected with carcinomatous tubera; a portion of the stomach, duodenum, and pancreas shown in the preparation.

The liver was occupied by medullary and carcinomatous tubercles, many of them very large; one was about the size of a large apple, it was situated in the under part of the great lobe of the liver near its surface, and its covering had become united firmly to the peritoneum, near the termination of the ductus communis choledochus in the duodenum; this duct and the hepatic duct were obliterated, which gave rise to the yellow color of the cellular tissue.

The gall-bladder was filled with an albuminous fluid,

not in the least colored with bile. The pancreas was affected with carcinoma (a viscus seldom found diseased), and firm adhesions had formed between its outer surface and the pylorus, as is shown in the preparation.

The intestines were firmly agglutinated, and the mucous glands enlarged, some were ulcerated.

From a man 70 years of age, who had signs of organic disease of the liver for several months; he had frequent attacks of vomiting, and his digestive organs were greatly disordered; he complained of great pain in the epigastric region, and in the right shoulder; jaundice came on, followed by ascites, which caused his death.

1186 Liver affected with carcinoma.

1187 Medullary sarcoma in the liver, with carcinoma.

1188 Liver affected with medullary sarcoma and carcinoma. History of the case not known.

1189 Liver affected with medullary sarcoma and carcinoma.

A female 42 years of age, for nearly three years had symptoms denoting a stricture in the rectum; she suffered severely, her health became affected, her countenance sallow, and symptoms of organic disease of the liver came on gradually.

On examining the rectum, a stricture was detected about three inches from the verge of the anus, the caliber was very small, and a dense tumor was felt. The liver was also enlarged, and when moderate pressure with the hand was employed on the left hypochondriac region, great pain was produced; this test made it evident, that the disease in the rectum and the liver, was of a malignant nature.

For nearly three months previous to her death, she suffered agonising pain, particularly in voiding the fæces, which could only be effected by the assistance of clysters; pus and blood were frequently voided; she had great difficulty in making water, and could scarcely keep any thing in her stomach, and was much annoyed with flatulence.

Every thing was done with the view to allay her sufferings, but without success.

On opening the abdomen, a large quantity of fæculent matter was found in that cavity; the cæcum, colon, and rectum, as far as the strictured part, were

greatly distended with fæces condensed into scybalaë. On searching for the cause of the escape of the fæculent matter, it was found to be an ulcerated opening of the coats in one portion of the cæcum, from having been over distended. The peritoneum and all its reflections over the viscera were highly inflamed. The liver (particularly the left lobe) was converted into genuine carcinomatous tubera of various sizes; the right into medullary tumors. The kidneys were affected with small tumors of a schirrous density; the uterus was healthy, but the right ovarium was converted into a carcinomatous tumor, as large as a small turnip.

On carefully examining the rectum, it was found that the malignant disease had commenced in the cellular tissue connecting the coats of this intestine; its growth had progressively made its way into the cavity by ulcerative absorption of the muscular and mucous coats. The tumor was situated about four inches from the verge of the anus; its structure was strictly cancerous, of considerable density, and it had nearly obliterated the natural canal.

The internal surface of the bladder was greatly inflamed.

190 Medullary sarcoma of the liver, injected.

191 Liver affected with medullary sarcoma.

192 Liver affected with medullary sarcoma.

The history of this case and the dissection, are published in the 9th Volume of the Royal Medico-Chirurgical Transactions.

A man, 56 years of age, had been afflicted with diseased liver for several years; jaundice came on a few months previous to his death.

The gall-bladder did not contain much bile, it was of a blackish color; the cystic duct, as well as the hepatic and the common duct, were filled with fungoid matter.

193 Two portions of diseased liver. The liver was very large, and there were an immense number of medullary tumors in its substance; the serous membrane was greatly thickened, and there were long thick adhesions between the upper surface of the liver and the diaphragm; these are shown in the preparation.

The pulpy matter was pressed out of the tumors, to

show the cellular texture in which it had been deposited, this is greatly thickened. The vena cava hepatica was filled in many parts with medullary matter. The lungs were affected with the same disease.

This case is published in the Transactions of the Medico-Chirurgical Society.

1194 A portion of liver affected with medullary sarcoma; the serous covering was thickened, and very vascular.

1195 Liver affected with medullary sarcoma, the gall-bladder thickened. The liver injected.

A woman, 56 years of age had lived very irregularly; the liver projected considerably beyond its boundary; she complained of great pain in the right shoulder, the fæces were clay-colored, and she had frequent attacks of bilious vomiting.

A few months previous to her death jaundice came on. There was not the least sign of peritoneal inflammation; the liver seemed to occupy nearly the whole abdomen; it felt very firm, and its external appearance was of a dark green color (this is preserved in the specimen), with the exception of numerous whitish circular spots beneath the serous covering. These maculæ were various in size, the largest not exceeding an inch in diameter, they had scarcely any projection; the largest had central depressions, from the serous surface having become cartilaginous, and there were a number of minute arteries supplying those diseased parts. The ductus cysticus, hepaticus, and communis choledochus were plugged up with a black morbid secretion. The liver was of a deep green color, as if the minute biliary ducts had diffused their contents, instead of conveying them into their main tubes.

There were a great number of medullary tubera of different sizes in the liver, and although the arteries had been injected with subtle fluid, scarcely any signs of vascularity were seen on making sections of the organ. The gall-bladder was filled with the same kind of secretion noticed in the biliary ducts. The spleen was enlarged but not diseased; all the other viscera were healthy, but the veins were gorged with black blood.

The case and dissection is published in the 9th Volume of the Royal Medico-Chirurgical Transactions.

196 Liver affected with medullary sarcoma. From a man, 56 years of age.

The liver was greatly enlarged by medullary tubera of considerable size, many of which presented externally. The lungs were also affected with the same disease.

The preparation shows two of the tubera; in one the brain-like matter was pressed out to show the cellular texture, which is greatly thickened where the medullary matter had been deposited.

197 Liver affected with medullary sarcoma.

The liver injected. Some of the brain-like matter was washed out to show the dense cellular texture in which it had been deposited.

198 A section of liver. The liver was of a very pale color, its surface thickly covered with organised lymph; its structure nearly filled with remarkably large tumors, composed of a very dense cellular texture, the cells were filled with a secretion like cream.

The fluid was pressed out of one of the tumors, which has the appearance of a piece of sponge; this is seen in the preparation. The gall-bladder was empty.

This specimen was taken from a gentleman high in rank; he had ascites, and paracentesis had been performed.

I have never seen a similar disease in the liver, but I have a tumor in my Museum which was extirpated, and which shows all the morbid structure seen in the tubercles of this liver; the disease ultimately proved to be of a malignant nature; it will be described in the history of Local Tumors.

In Dr. BAILLIE's valuable Work on Morbid Anatomy, there is a description of what he has termed "a large white tubercle", which I think is like the tumors I have described.

His description is not very satisfactory, for he thought it resembled the ordinary appearance of schirrus in other parts of the body, or that it was of a scrofulous nature; these are very dissimilar morbid products, and are rarely seen combined. I have no doubt

that the disease is one of the varieties of medullary sarcoma.

- 1199 A portion of liver, resembling in a slight degree, the structure of the tumors last described; the cellular tissue is thickened and formed into small cells, which contained a thick brown-colored secretion; the structure of the liver was very firm, and of a pale hue. The serous covering was greatly thickened by chronic inflammation, and there were several projections beneath it, resembling an aggregation of small granular bodies, which were found to have been produced by a secretion into the cellular tissue, similar to that seen in the liver.

The history of this case is not known.

- 1200 Liver, with medullary sarcoma.

In one of the tubera near the external surface of the liver, there is a central depression, which is produced by a semicartilaginous state of the serous surface.

The patient, 59 years of age, had been addicted to dram-drinking for many years; ascites came on, which was followed by an attack of icterus a few months previous to his death.

The liver was nearly filled with different sized fungoid tumors, and many of the veins were loaded with fungoid matter.

The gall-bladder was thickened and shrivelled; the spleen large and solid.

There was a considerable quantity of water in the abdomen.

The case and dissection are published in the 8th Vol. of the Royal Medico-Chirurgical Transactions.

- 1201 Liver affected with fungus hæmatodes and carcinoma.

The lungs were affected with the same diseases.

The patient died of ascites.

- 1202 Two sections of liver, injected, showing carcinoma and fungus hæmatodes.

From a woman who had a cancerous mamma, she died of ascites and jaundice.

Carcinoma, fungus hæmatodes, medullary sarcoma, and melanosis are often seen combined; sometimes accidentally with scrofula.

See my observations in the Royal Medico-Chirurgical Transactions, Vol. 8 and 9.

203 Liver affected with fungus hæmatodes and carcinoma. From a man 65 years of age, who had been afflicted with a diseased liver for several years.

A few months previous to his death, his health became seriously impaired; the liver projected considerably beyond the ribs, and from his being greatly emaciated inequalities on the surface of the liver were distinctly felt; his bowels were disordered, the urine deficient in quantity, and he occasionally vomited blood; jaundice and ascites supervened.

There were nearly two gallons of water in the abdomen; the peritoneum was greatly inflamed, and thickened by coagulated lymph; firm adhesions had been effected between the peritoneum and the serous surface of the convex part of the liver; and all the intestines were agglutinated.

The serous covering of the liver was greatly thickened, and the external part of this viscus presented a nodulated appearance (as seen in the preparation); its structure was composed of fungus hæmatodes and carcinoma. The vena cava and most of its ramifications were filled with medullary matter. The gall-bladder was shrivelled and empty, and the cystic duct obliterated.

The spleen was large and dense in structure. There was a large coagulum of blood in the stomach, which had been produced by the minute vessels belonging to the mucous surface having poured out their contents; this accounts satisfactorily for the attacks of hæmatemesis from which the patient had suffered.

All the other viscera healthy.

The history of this case is published in the 8th Volume of the Royal Medico-Chirurgical Transactions.

204 A portion of liver. A boy, 19 years of age, who had lived in the Hundreds of Essex ever since his birth, had suffered from repeated attacks of ague, connected with an hepatic affection.

His health became seriously impaired, jaundice came on, followed by ascites, and œdema of the lower extremities; paracentesis was performed, merely to afford temporary relief.

There was a large quantity of water in the abdomen; the peritoneum was inflamed, and was slightly thickened by coagulated lymph.

The liver was enormously enlarged, and its external surface presented an accumulation of white colored tumors of different sizes, which did not project far; the serous coat was not much altered in texture.

On cutting through the liver, it was found to be converted into tumors of a schirrous density; the remainder of the liver resembled fungus hæmatodes; these appearances are seen in the preparation.

The gall-bladder contained a small quantity of bile; the spleen was of an immense size, the capsule greatly thickened, and its substance exactly resembled that seen in the liver. The pancreas was not affected.

Most of the absorbent glands on both sides of the abdomen were greatly enlarged by the same morbid changes observed in the liver and spleen. The mucous glands in the intestines normal.

There was a considerable quantity of water in both sides of the chest, and the lungs were œdematous. There were about four ounces of water in the pericardium; the heart was healthy.

This is a very remarkable case. It would be a difficult pathological point to decide whether the disease had its origin from birth, or whether the morbid appearances had been produced by numerous attacks of intermittent fever, causing consolidation and serous effusions into different cavities.

1205 Two portions of liver affected with medullary sarcoma, and fungus hæmatodes. The patient, a man, died of ascites and jaundice.
History not known.

1206 Two portions of liver affected with medullary sarcoma, and fungus hæmatodes; the lungs and the bronchial glands affected with the same morbid changes.

1207 Liver affected with medullary sarcoma, and fungus hæmatodes. From a man 50 years of age; he had lived very irregularly, and became affected with a diseased liver. For nearly six months previous to his death, he had occasionally been subject to attacks of diarrhœa and intestinal hæmorrhage, which were succeeded by jaundice and ascites.

There was half a gallon of water in the abdomen, the liver was not much enlarged; its serous covering was greatly thickened, and in some parts semicarti-

laginous; the external surface nodulated, the structure nearly filled with fungoid and medullary tubera of various sizes, and the veins filled with the same kind of secretion. The gall-bladder was distended with deep green-colored bile; the spleen was enlarged, and its structure dense.

The history of this case is published in the 8th Vol. of the Transactions of the Royal Medico-Chirurgical Society.

This case shows that malignant disease may attack an important organ, and produce death, without affecting any other viscus.

- 1208 A portion of liver affected with fungus hæmatodes. From a man 43 years of age, who had a diseased knee-joint; the leg was amputated at an Hospital, and on examining the morbid part, it was found affected with fungus hæmatodes.

Six months after the operation his health began to decline rapidly; his countenance became sallow, and tumors were felt beneath the skin in various parts of his body; ascites supervened, which hastened his death.

The liver was extremely large, and its principal bulk was composed of various sized fungoid tumors and melanoid matter; the arteries of the serous covering were extremely numerous, and some of the absorbents very apparent. There were a great number of fungoid tumors in the omentum and mesentery.

The lungs were not affected.

- 1209 Liver affected with fungus hæmatodes. The liver was injected.

- 1210 A portion of liver affected with fungus hæmatodes, preserved in alcohol.

There were several similar tubera in the liver, and in the lungs.

- 1211 Liver affected with fungus hæmatodes. The patient 20 years of age; the lungs were affected with the same disease.

- 1212 Liver affected with fungus hæmatodes. From a woman 60 years of age; she died of ascites.

- 1213 A section of liver showing fungus hæmatodes. The tubera very numerous; the structure of the liver of a mottled deep-green color, from the effusion of bile, the hepatic duct having been obstructed by viscid bile.

The liver was injected, but scarcely any signs of vascularity were seen on making sections of it.

The gall-bladder was empty, the spleen large and dense in structure. The patient, 60 years of age, died of ascites and jaundice.

- 1214 Fungus hæmatodes in the layers of the mesentery; there were several tubera of the same character in the liver; a few of them are shown in the preparation.

- 1215 Liver affected with fungus hæmatodes; some of the absorbents are shown, also the gall-bladder; its internal surface of a deep green color, produced by a morbid secretion within it. Several parts of the body were affected with the same disease.

The history of this case is related in the 9th Volume of the Transactions of the Royal Medico-Chirurgical Society.

- 1216 Punctiform melanosis in the liver; the lungs and several other parts of the body were affected with this disease. The patient died of jaundice and ascites.

- 1217 Liver affected with melanosis; the internal surface of the serous covering is discolored with the pigment, as is shown in the preparation. It is reflected from the surface of the liver.

The patient died of jaundice and ascites; several other viscera were affected with this disease.

Sometimes the melanoid tumors in the liver are encysted. There is a preparation from my collection in the Museum of the Royal College of Surgeons, of a liver affected with melanosis, showing this fact.

The history of the case and dissection are published in the 3rd Volume of the Royal Medico-Chirurgical Transactions.

- 1218 Liver affected with carcinoma and melanosis; the lungs were also affected. The patient died of ascites.

This preparation shows admirably the different stages of melanosis; it was put up 25 years ago.

In the Museum of the Royal College of Surgeons, there are a number of preparations of melanosis in various parts of the body, which were selected from my Collection.

- 1219 Liver affected with melanosis. There is in the same bottle, a portion of the parotid gland affected with carcinoma.

The two last specimens were taken from a woman who had melanosis of the eye.

1220 Three specimens of melanosis in the liver, with carcinoma.

1221 Two slices of liver affected with carcinoma and melanosis; the lungs were also diseased. From a woman 65 years of age.

History of the case not known.

1222 Liver affected with tuberiform melanosis and medullary sarcoma; the mesentery was also diseased. The patient died of ascites.

This is a splendid specimen. The liver injected.

1223 Liver affected with medullary sarcoma and melanosis. The liver was extremely large, very dense in structure, and nearly filled with medullary tubera and melanosis. The serous surface thickened, and there were adhesions between the convex part of the liver, and the peritoneum. The spleen was also affected with the same disease.

The patient was a woman, 60 years of age, who had jaundice, ascites, and œdema of the inferior extremities.

1224 Liver affected with melanosis and fungus hæmatodes. The patient died of ascites.

Gall Bladders and Biliary Concretions.

1225 Gall-bladder, very large, internal surface shown. The liver was pale-colored, its texture very soft, without showing the least sign of organic lesion.

The gall-bladder contained a considerable quantity of orange-colored bile; the internal coat inflamed.

The spleen large, substance healthy, but its capsule was thickened.

The stomach and intestines presented a dark-colored appearance; the cause of this discoloration was found to be a black-colored secretion from the vessels of the mucous membrane, which had tinged all the coats of these parts, as in melæna. The pancreas was natural.

The pia mater was inflamed, but there was no effusion between this membrane and the arachnoid, and the

ventricles of the brain did not contain more fluid than natural.

There were old standing adhesions of the pleuræ, and there was a pint of water in each side of the chest: the lungs were natural, as was also the heart, with the exception of a softened state of its structure.

From a man who had experienced several reverses in fortune, and had lived freely; he had long been suffering from the miseries occasioned by a morbid condition of his digestive organs; the fæces were of a dark color, and he frequently vomited a fluid like coffee-grounds; he died suddenly.

- 1226 Gall-bladder, greatly lessened in size, and much shrivelled; it contained a small quantity of purulent fluid and coagulated lymph. There were no signs of its natural reticulated arrangement, nor the least appearance of being tinged with bile; the ductus cysticus obliterated.

The history of this case not known.

- 1227 A portion of liver with the gall-bladder. A woman, 50 years of age, who had been accustomed to enjoy the good things of this world, had suffered for a considerable time from hepatic disease, and for some months previous to her death symptoms of organic disease of the heart came on, which were succeeded by hydrothorax.

There were about six pints of water in the abdomen; the liver was large, very firm in texture, of a very yellow color, and granulated.

The gall-bladder was enormously distended with a thick deep green-colored secretion; its internal surface was ulcerated, and all the coats greatly thickened. The cause of the detention of the contents of the bladder, was the obstruction of the cystic duct by inspissated bile. This is a proof, added to many I possess, that disease in the liver may occasion organic lesion in the heart, and effusion into the pericardium and chest.

The description of the heart will be given.

- 1228 Gall-bladder, with the biliary ducts. The gall-bladder is completely filled with biliary calculi of various sizes, of a pale white color, which are shown in the preparation; the ductus hepaticus and communis choledochus very capacious.

This preparation was taken from a man who had a very large calculus in his urinary bladder; he committed suicide.

1229 A portion of liver, with the gall-bladder and biliary ducts. There were about six pints of water in the abdomen; the liver was firmly adherent to the anterior part of the sac of the peritoneum; it was enormously enlarged, and extended so low into the abdomen as to hide all the other viscera.

The peritoneal covering was thickly coated with lymph, the substance was of a blackish green color, and so extremely soft as to be lacerated by the slightest pressure with the fingers. The coloring matter which was expressed from the substance of this viscus was of a blackish green hue, as if mixed with bile and melanoid matter.

The gall-bladder was not thickened, nor was the reticulated internal surface; its coats were tinged of a blackish green color, and it was completely filled with various sized biliary concretions; one of these was as large as a nutmeg, and a small one closed the commencement of the cystic duct.

The spleen was large, and nearly of the same color as the liver; all the abdominal viscera had a blackish hue, as had also the kidneys.

Both sides of the chest contained a large quantity of bloody looking fluid; there were about six ounces of water in the pericardium.

The heart was large, left ventricle greatly dilated; parietes thin, and the muscular structure remarkably soft, and of a blackish color.

The lining membrane of the auricles and ventricles thickened by organised lymph; the internal coat of the aorta and pulmonary artery inflamed; the left coronary artery nearly obliterated by lymph; the right, at its origin, aneurismal.

From a man 50 years of age, who had been for many years accustomed to dram-drinking, for upwards of three years he had been subject to dyspepsia; his bowels were constipated, and his conjunctivæ and skin showed, from their yellow color, a diseased liver.

Six months previous to his death, his health became much affected; the fæces of a blackish green color, the urine high colored, and deficient in quantity;

he had also a dry cough (*tussis hepatica*), and his pulse was generally irregular. Hydrothorax and ascites came on, accompanied with great difficulty in breathing, which was very distressing.

With a view of affording him temporary relief, paracentesis abdominis was performed, and nearly 30 pints of green-colored fluid were drawn off.

In consequence of the liver descending so low into the abdomen, I found it necessary to perform the operation considerably lower than is generally advised, lest the liver should be punctured. The effect of tapping was very gratifying to the patient, relieving his dreadful sufferings completely: he continued so well for nearly a fortnight, and without any signs of increase of fluid in the abdomen, that he flattered himself with the hope of recovery.

The fluid again began to accumulate, and it was thought right to repeat the operation; 24 pints were evacuated. He died on the sixth day from the time that this was performed.

- 1230 A portion of liver, with the gall-bladder and ducts. The liver was remarkably large, solid in texture, and seemed gorged with bile; it showed little vascularity.

The gall-bladder was greatly distended with an albuminous fluid, perhaps its own secretion, and it also contained a great number of calculi; one, of the size of a very large marble, had completely obliterated the commencement of the cystic duct; the coats of the bladder were thickened, particularly the internal; there were no signs of the natural reticulated structure, and it was of a pale color.

The spleen was large and dense.

From a woman 60 years of age, who died of jaundice and ascites.

This is a beautiful preparation.

- 1231 A portion of liver, with the gall-bladder. There were several moderate sized calculi in the gall-bladder, situated in its fundus; these had occasioned irritation and inflammation of the internal surface of the sac; adhesion had taken place about the centre of the bladder, which completely surrounded the calculi, like a cyst, whilst the lower half had carried on the natural office of the sac.

The biliary ducts were pervious, the liver deeply tinged with bile, and its structure greatly intruded on, by the formation of medullary and carcinomatous tumors.

The spleen was very large, structure dense. The mucous coat of the cæcum was also affected with medullary tumors, as was the kidney.

The patient, 60 years of age, had suffered severely for nearly two years with hepatic disease; she was icteroid, and complained latterly of severe abdominal pains; her bowels were greatly disordered, the evacuations being frequently mixed with blood and pus.

The peritoneum was generally inflamed, and its reflections were agglutinated to most of the convolutions of the intestines by lymph.

The liver was very large, and of the morbid structure I have described; that part of the gall-bladder containing the bile, was distended with a very black colored fluid, which by dilution in water, gave out a deep yellow color.

1232 A portion of liver; the gall-bladder, with biliary calculi. From a woman 55 years of age, who had suffered from hepatic disease for several years, and died of ascites.

The liver was very soft, of a pale yellow color, and granulated. The coats of the gall-bladder greatly thickened, its internal coat ulcerated, the effects of irritation produced by calculi. There was an ulcerated opening at the fundus of the gall-bladder, adhesion had been effected between its serous covering and a portion of the transverse arch of the colon, and the opening had communicated with the cavity of this intestine, which in all probability allowed of the escape of some of the calculi.

The aperture had afterwards become nearly obliterated by lymph, as is shown in the preparation by a piece of glass. There was no bile in the gall-bladder; the biliary ducts were very large, and their internal coat greatly thickened by chronic inflammation.

This is an unique preparation.

1233 A portion of liver, with a diseased gall-bladder, the

consequence of a very large calculus. A portion of the duodenum is also preserved, to show the entrance of the ductus communis choledochus.

From a woman 72 years of age, who had enjoyed health for the principal part of her life. During the last five years of her existence, she had increased greatly in corpulency. For about six months previous to her death, she had been troubled with tussis hepatica, accompanied with frequent attacks of vomiting, and she complained of violent pain in the region of the gall-bladder. These symptoms increased in violence for nearly two months previous to her dissolution. The evacuations from the bowels were clay-colored, the urine scanty in quantity, and of a deep yellow color, and she became intensely jaundiced.

The liver was of a deep yellow color, from the bile having been detained in the biliary vessels, in consequence of the obliteration of the ductus communis choledochus by viscid bile. The structure of the liver was very hard, the effects of chronic inflammation; but there were no signs of tubercular or malignant disease.

The gall-bladder did not contain bile, but it was distended by an immense gall-stone, in figure and size as large as a pigeon's egg; it weighed 203 grains. The internal coat of the bladder had lost all its natural structure, and was of a brownish white color; there was pus between it and the peritoneal coat. All the other viscera healthy.

The aperture of the ductus communis choledochus is immensely large, which induces me to imagine, that during the patient's life, a large calculus had passed through the duct into the duodenum.

A portion of the pancreas is also shown in the preparation.

- 1234 Gall-bladder, with an irregularly formed gall-stone. The coats greatly thickened, and the internal surface highly inflamed, and partly ulcerated; its natural appearance effaced. The liver large, structure inflamed.
- 1235 Diseased gall-bladder, which contained an immense number of different sized calculi. The coats surprisingly thickened, the internal coat destroyed by

ulceration, and its place supplied by coagulated lymph.

The liver occupied nearly the whole of the abdomen, and weighed twenty pounds; it was remarkably dense in structure, of a deep yellow color, and its bulk chiefly composed of medullary and carcinomatous tumors; the cellular tissue was of a yellow color.

The following parts of the body were affected with the same disease in this individual, they will be described in their appropriate places, viz.—the diaphragm, omentum, and pancreas.

1236 Gall-bladder, with the biliary ducts; also a portion of the duodenum, showing the termination of the ductus communis choledochus.

The liver was very solid in texture, of a deep yellow color, and granulated; the spleen very large, capsule thickened, structure very firm.

The gall-bladder was completely filled with large biliary calculi, in external appearance resembling a mulberry; the hepatic duct and ductus communis choledochus were greatly dilated by the same kind of calculi as those seen in the gall-bladder; the latter duct was obliterated.

The opening of the common duct is very large, which must have been caused by the passage of a calculus or calculi at different times, from the duct into the duodenum; and what is most singular in this specimen is, that a portion of the hepatic duct had become adherent to the serous surface of the duodenum, and an opening of communication between them had been effected,—this is shown in the preparation. It is probable that the presence of a calculus in this duct, was the cause of the formation of the aperture, and this and more might have escaped into the duodenum.

In consequence of the morbid parts having been removed roughly by the person who made the post-mortem examination, some of the adjacent portions are wanting to illustrate the appearances.

This is a very remarkable preparation.

1237 A gall-bladder, with an immense number of various sized calculi. From a woman who died from the effects of a diseased liver, with ascites. The liver was granulated, very solid in texture; spleen greatly enlarged, and very firm.

- 1238 Inspissated bile formed into granules, similar to biliary calculi. From a woman ; the liver was granulated, the spleen large and firm in texture, and there was a great quantity of fluid in the abdomen.
- 1239 Inspissated bile in granules.
- 1240 A very large biliary calculus. The liver granulated, and very dense in structure.
From a man 60 years of age, who died of ascites.
- 1241 A very large biliary calculus, of a brownish white color, with minute glistening particles like spar (cholesterine) on its external surface.
From a man 74 years of age, who had been hemiplegic for several years.
The arachnoid and pia mater were greatly thickened, and there was a considerable quantity of water between them ; there was a tumor beneath the pia mater. The morbid parts are in the Museum of the Royal College of Surgeons.
- 1242 Biliary calculi of various sizes, color white ; the weight of the whole 174 grains, the largest weighed 47 grains. The liver was very large, its structure resembled the section of a nutmeg. The gall-bladder was filled with calculi, which felt like spermaceti. The spleen was large and firm in texture.
From a woman 60 years of age, who had been affected with organic disease of the heart for several years ; —she died suddenly.
The pericardium adhered very firmly, as if it had been so from birth. The heart was enormously large, the left ventricle very capacious, parietes thin, muscular structure very soft ; the coronary arteries normal. The left ostium venosum constricted by cartilaginous and osseous deposits, and both the auricles greatly dilated and filled with black blood.
There was a large fibrous tumor in the uterus, the white tubercle of BAILLIE. There was also a large inguinal hernia on the right side ; the ring was very large, the sac containing a portion of the ileum, with a piece of omentum, and the principal part of the fallopian tube, and the ovarium.
The patient had never worn a truss ; the husband of this woman had a diseased heart, and an aneurism of the arch of the aorta.
- 1243 Biliary calculi, six in number ; they are of a pale

white color ; the external appearance similar to that of a mulberry. From a man, 59 years of age ; the liver affected with cirrhosis, the spleen enlarged.

1244 Biliary calculi of various sizes ; the patient died of diseased liver.

1245 Biliary calculi of various sizes in great number ; from a man who died of diseased liver, and organic disease of the heart.

1246 Biliary calculi of various sizes, in great number. From a woman 48 years of age ; the liver was extremely large, color very yellow, structure granulated, veins gorged with blood.

The spleen was nearly double the natural size. The patient had a large exomphalus, which had occasioned ulceration of a portion of the transverse arch of the colon ; this will be described in the history of herniæ.

1247 Biliary calculi. From a man 60 years of age, who died of diseased liver and ascites.

1248 Biliary calculi, cholesterine. From a man 40 years of age, who died of a diseased liver and spleen.

1249 Biliary calculi ; two large, and several small ones.

From a woman 59 years of age, who had long been accustomed to dram-drinking ; she became dropsical, and icterus supervened, which caused death.

The liver was greatly enlarged, its structure extremely flaccid, and highly tinged with bile ; the biliary ducts were very capacious, and the gall-bladder greatly distended with green-colored bile ; it contained several biliary calculi of various sizes ; the largest, of an elliptical figure, resembled a plumstone, it is rough externally, as is seen in the preparation.

The spleen was large, structure extremely soft, and its blood-vessels were loaded with a blackish fluid, which might be denominated melanoid. The lungs were surcharged with dark-colored blood in a fluid state. The heart was large, its structure extremely soft, and easily lacerated. The venæ cavæ greatly dilated with blood, similar to that noticed in the lungs, as was the right auricle and ventricle ; the tricuspid valve slightly thickened. The left auricle and ventricle were greatly distended with dark-colored blood in a fluid state ; the mitral valve

thickened. The semilunar valves of the aorta were partly ossified, also the internal coat of the aorta and coronary arteries. The patient died suddenly; the brain was not examined.

- 1250 Biliary calculi of various sizes, the number immense. A man 60 years of age, had been long afflicted with a diseased liver, which occasioned jaundice and ascites.
- 1251 Biliary calculi.
- 1252 A biliary calculus. From a woman who died of ischuria renalis, which continued nearly a fortnight. The brain became affected, the membranes were inflamed; there was a considerable quantity of yellow fluid in the lateral ventricles, also in some of the veins, which smelt like urine.
The uterus was affected with carcinoma.
- 1253 Biliary calculi. The patient had a large calculus in the urinary bladder.
- 1254 Biliary calculi.
- 1255 A very large biliary calculus, and several small ones. The large one weighed 310 grains, the small one 8 grains. From a woman who died of apoplexy, 74 years of age.
The arachnoid and pia mater were thickened, and there was a considerable quantity of water between them. The structure of the brain was inflamed, and there were about two ounces of water in the lateral ventricles; and in the centre of the right lobe of the cerebellum, there was a coagulum of blood about the size of a nutmeg. The liver was very large, and granulated; its capsule greatly thickened. The right kidney was greatly enlarged, and presented a lobulated appearance.
The preparation of the brain is in the Museum of the Royal College of Surgeons.
- 1256 A number of biliary concretions. From a man who had a diseased liver and spleen, connected with ascites.
- 1257 Three biliary calculi, and a small one; some portions of their external surface are highly polished, occasioned by the action of the gall-bladder. There was a calculus in the urinary bladder.
- 1258 Two biliary calculi. There was a calculus in the urinary bladder.

- 1259 Two biliary calculi.
 1260 Biliary calculi.
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LIVER.—*Comparative Anatomy.*

- 1261 Liver of a Baboon ; its substance nearly occupied by very large and small scrofulous tubercles. The mesentery was similarly affected, and the mucous glands of the intestines were affected with the same disease.
- 1262 A portion of the liver of a Monkey, with tubercles of various sizes in its substance, and beneath its serous covering. The tubercles did not present that rounded or globular figure which we notice in miliary tubercles seen in the human subject, monkeys, &c. they were more dense in structure, of a white color, and flattened, particularly beneath the serous covering, and partly resembled what we notice in the incipient stage of carcinomatous tumors. The mesenteric glands had also undergone a similar morbid change, and the glandulæ aggregatæ in the intestines were greatly enlarged.
- 1263 Liver, spleen, stomach, omentum, and pancreas of a Monkey, affected with scrofulous tubercles. The animal had been long domesticated.
- 1264 A portion of the liver of a Cat, injected, showing the acini, &c.
- 1265 A portion of liver, showing the absorbent vessels on its surface ; from a Deer.
- 1266 A portion of the liver of a Cow. The external appearance presented a pale white color, as if it were bloodless ; on cutting through its substance scarcely any signs of its natural structure were visible ; it seemed composed of dense reticulated cellular tissue, which is evident in the preparation ; all the biliary ducts were immensely thickened, and dilated by viscid green-colored bile, and living fasciolæ. The gall-bladder was in the same condition. The biliary tubes were greatly thickened, and osseous matter had been deposited on their internal surface.
 The animal was greatly emaciated, the muscles flaccid, and of a pale yellow color, as were the conjunctivæ.

1267 Two gall-bladders, united at their necks, with only one cystic duct ; one of the bladders rather larger than the other—from a Bullock.

1268 A portion of liver, with the gall-bladder of a Bullock. The liver was greatly diseased, the gall-bladder immensely large, and all its coats greatly thickened ; it was distended by albuminous fluid, which must have been secreted by the capillaries of the internal coat, as there was no sign of the existence of a cystic duct ; it is very remarkable that the internal coat is formed into various sized sacculi, similar to what I have seen in the human bladder, where there had been suppression of urine, occasioned by a diseased prostate gland, stricture in the urethra, or from urinary calculi.

Is it not likely that the pouches seen in this gall-bladder were produced by the difficulty in expelling its contents ?

This is a singular specimen.

1269 A portion of the liver of a Sheep ; the natural structure completely destroyed by chronic inflammation and depositions of lymph, occasioned by *fasciolæ*, or flukes, filling and greatly dilating the biliary ducts, and the gall-bladder.

Several of the *fasciolæ* are shown in the preparation. They generally cause ascites and jaundice.

1270 A portion of the liver of a Sheep, consolidated by *fasciolæ* or flukes in the gall-ducts.

The arteries were injected with size and vermillion ; but on making sections of the liver, no signs of vascularity were observable.

1271 A portion of the liver of a Sheep, showing the effects of *fasciolæ* or flukes on the biliary ducts. The liver was injected with size and vermillion ; on cutting through the liver, scarcely any signs of vascularity were observable, except on the internal surface of the biliary tubes ; they were greatly dilated by *fasciolæ*, as was the gall-bladder ; and the structure of the liver was nearly destroyed.

Several of the flukes shown.

1272 Liver of a Sheep, injected with size and vermillion ; the gall-bladder shown.

On making sections of the liver, the biliary ducts were found to be greatly dilated, and filled with flukes,

and the internal surface very thick, and injected ; but the liver was not colored with the injection ; its structure was granulated.

The gall-bladder was also filled with flukes and viscid bile ; its internal surface highly injected, also the cystic duct. Several of the flukes are shown in the preparation.

- 1273 A portion of liver, with the gall-bladder and biliary ducts of a Sheep. The peritoneal covering greatly thickened by organised lymph ; its substance consolidated by lymph and bilious effusion. All the biliary ducts were greatly dilated, and filled with dead flukes ; the internal coat immensely thickened by organised lymph ; the gall-bladder was also completely filled with dead flukes, its internal surface condensed, and its fundus and a portion of the liver destroyed.

As the liver was examined soon after death, it is fair to conclude that the death of the fasciolæ arose from inanition, the liver having ceased to secrete bile, the fluid on which these animals subsist ; and the appearances which the fundus of the gall-bladder, and the portion of liver connected with this part present, might have been produced by some of the living flukes endeavouring to obtain nourishment from the liver.

- 1274 A portion of the liver of a Sheep, with hydatids in its substance, and on the serous surface.

The liver was pale-colored, and dense in structure.

- 1275 Liver of a sheep, injected, showing a large and dense cyst, which had contained a great number of hydatids.

The structure of the liver was nearly destroyed by numerous hydatids ; and the biliary ducts and gall-bladder were filled with fasciolæ or flukes (*distoma hepaticum*.)

On opening some of the cysts of the hydatids, they were found to contain dead hydatids, mixed with pus ; and the internal coats of the cysts were minutely injected, which proved that the growth of the hydatids had occasioned inflammation and supuration. The external surface of the liver covering the cyst of the hydatid is cartilaginous, which is seen in the preparation.

- 1276 Liver of a Sheep, with a large hydatid in its substance ;

it is situated near the serous surface ; the cyst externally is cartilaginous.

A portion of the liver was removed, also a part of the cyst, to show the hydatid.

- 1277 A portion of a Sheep's liver, showing hydatids, and their fibrous cysts. There were also hydatids in the lungs. The muscles of the animal were very flaccid, and of a yellow color ; and there was water in the abdomen.
- 1278 A portion of the liver of a Sheep, with an hydatid in its substance, which had lost its vitality ; the cyst which contained it had become osseous.

SPLEEN.—*Morbid Anatomy.*

- 1279 Part of a spleen injected with size and vermillion ; also with wax injection ; afterwards the arteries were partly unravelled. The spleen was of an immense size ; the blood vessels were gorged with blood ; the patient a soldier who had suffered from the Walcheren fever, and died in England.
- 1280 Spleen of a large size (injected) ; its structure extremely dense. The patient had suffered for a great length of time from repeated attacks of ague.
- 1281 Spleen of an infant, about three months' old ; hepatised by inflammation and effusion of lymph ; the liver was also similarly affected.
- 1282 Spleen of a child ; it is of an immense size, its structure consolidated by interstitial deposition of lymph and coagulated blood ; the result of chronic inflammation. The liver was affected in a similar manner.
- 1283 Spleen consolidated by chronic inflammation. A man 26 years of age, who had suffered several attacks of intermittent fever ; his liver was also diseased.
- 1284 Spleen of a child consolidated by chronic inflammation and interstitial deposition of lymph.
- In the same bottle there is a specimen of inflamed blood taken from a patient who was suffering under acute dropsy from plethora, and was cured by repeated bleedings and purgatives.
- The child was 2 years old ; it had been extremely delicate from its birth, and never appeared plump like a healthy one : its bowels had been generally

disordered ; and during the last six months of its life it suffered from remittent fever. The liver was very large, and its structure very firm, and of a brownish white color. The gall-bladder contained viscid green-colored bile. The spleen was large, and extremely solid, like liver ; of a brightish red color (which appearance is seen in the preparation), and the capsule greatly thickened. Most of the mesenteric glands were enlarged and very solid in texture ; not scrofulous. The mucous glands of the ileum and cæcum were very large, and the mucous surface highly vascular ; but ulceration had not taken place. The thoracic viscera healthy. In all probability the disease had its origin previous to the birth of the child.

1285 Spleen consolidated by chronic inflammation and interstitial depositions of lymph ; the capsule semi-cartilaginous. The patient died of ascites and jaundice. The liver was highly inflamed, and dense in structure.

1286 Section of a spleen ; it was of an immense size ; its capsule greatly condensed, and partly cartilaginous ; its substance rendered nearly solid by chronic inflammation and interstitial deposition of lymph. A section of the spleen was made, and all the soft matter pressed out to show how small a quantity of the natural structure remained. The peritoneal surface of the liver was also greatly thickened, and its structure nearly destroyed by chronic inflammation and effusion of lymph. A man 60 years of age, who died of ascites.

1287 Section of a spleen, its capsule greatly thickened by organised lymph ; its structure as dense as in carcinoma. The man died from the effects of repeated attacks of intermittent fever. The history of this specimen is related in the Section on Morbid Livers.

1288 Section of a spleen, capsule cartilaginous ; vessels and cellular structure shown.

The liver was granulated.

1289 Spleen, a portion of the diaphragm, and lung. From a man 70 years of age.

The liver was greatly altered in structure from the effects of chronic inflammation, deposition of lymph,

and bilious effusion; the gall-bladder was filled with black-colored secretion.

The capsule of the spleen immensely thickened by cartilaginous and osseous deposits, which are shown in the preparation; the substance appeared like semi-fluid black currant jelly, which was washed out, to show the thickness of the capsule. The external surface of the spleen had formed long adhesions with the tendinous centre of the diaphragm, which was converted into solid bone; this is likewise exhibited in this very remarkable preparation. The pleura pulmonalis adhered firmly to the serous covering of the thoracic portion of the diaphragm. There was a considerable quantity of water in both sides of the thorax and in the abdomen.

1290 A diseased spleen; also a portion of liver.

The man, 59 years of age, had long shown signs of organic disease in the liver; he became icteroid, and ascites supervened, of which he died.

The liver was very large, of a yellowish color, and its structure extremely soft; the gall-bladder contained only a small quantity of bile, which was very thick.

The spleen was rather small; its capsule greatly thickened, in parts semicartilaginous; there were also a great number of small tumors on it as dense as carcinoma; these are seen in the preparation.

The rest of the abdominal viscera, and those in the thorax were healthy.

1291 A spleen consolidated by inflammation and minute miliary tubercles; there are also a great number of these tubercles beneath the capsule; they are seen in the preparation. In the same bottle there is a portion of lung, which shows all the morbid appearances seen in the spleen.

The child was eight months old, it had been extremely delicate from birth; symptoms of phthisis pulmonalis came on about three months previous to its death; the dyspnœa was so great, and the cough so distressing, as to occasionally resemble cynanche trachealis; the bowels were greatly disordered. The lungs were as solid as liver, and sunk in water; the result of tubercular disease, inflammation, and effusion of lymph.

The whole mucous lining of the trachea and bronchi was greatly inflamed. The spleen was filled with tubercles, and rendered solid by inflammation ; most of the mesenteric glands were converted into caseous matter ; and the glands belonging to the small intestines were diseased. The mother of this child showed all the signs of phthisis pulmonalis previous to becoming pregnant ; the symptoms subsided during gestation (which I have frequently noticed), but they recurred shortly after parturition, and she died six months after the death of the child. This case proves decidedly that consumption is an hereditary disease, and I have many other facts to substantiate this opinion.

- 1292 Spleen of a child greatly enlarged and consolidated by miliary tubercles and inflammation ; they are very numerous beneath the capsule. The child died of phthisis pulmonalis.

SPLEEN.—*Comparative Anatomy.*

- 1293 Spleen of a Calf, arteries injected with hard injection, the absorbent vessels with quicksilver.

PANCREAS.—*Morbid Anatomy.*

- 1294 Pancreas affected with carcinoma, the tubercles small. The liver and ovaria of this patient were nearly filled with medullary tumors.
 “The pancreas is subject to very few diseases.”
 “It seldom happens, on examining dead bodies, that it exhibits more than the healthy structure.”—
 BAILLIE’S *Morbid Anatomy*.
- 1295 Pancreas affected with carcinomatous tumors ; the pylorus is schirrous.
 From a woman 60 years of age.
- 1296 Pancreas, with a fungoid and melanoid tumor firmly attached to one portion of it. The history of this case is given in the 3rd Volume of the Royal Medico-Chirurgical Transactions.
 The following parts were affected with this peculiar disease : the brain, liver, intestines, sternum, ribs ;

and there was a very large tumor near the axilla.
Most of these preparations are in the Museum of
the Royal College of Surgeons.

- 1297 Pancreas affected with several fungoid tumors.
The liver and lungs were also nearly filled with the
same disease.
- 1298 Pancreas with medullary sarcoma in its substance.
The liver and stomach were affected with the same
disease.

SECTION X.

URINARY ORGANS.

KIDNEYS.—*Healthy and Morbid Anatomy.*

- 1299 Two kidneys united by an isthmus ; a congenital malformation, commonly denominated “the horse-shoe kidney.” The ureters and bladder shown. From a girl about 10 years of age, who died of hydrocephalus acutus.
- 1300 A kidney, structure healthy ; the capsule thickly covered with adipose substance.
- 1301 Section of a kidney beautifully injected.
The capsula propria is reflected ; it is slightly thickened. There are a great number of small serous cysts in the external and internal parts of the cortical substance. The man from whom this specimen was taken was killed suddenly by a horse. The other kidney was affected in a similar manner ; his lungs contained some scrofulous tubercles.
- 1302 A kidney ; nearly the whole of its natural structure destroyed by the production of large serous cysts, not hydatids ; the other kidney presented the same morbid change.
- 1303 Section of a kidney injected.
The kidney appeared very large ; nearly the whole of the cortical and medullary structure is converted into innumerable serous cysts, not hydatids. The other kidney was similarly affected. This is a beautiful specimen. The patient a woman, died of ascites, caused by a diseased liver.
- 1304 Section of a kidney. The capsule thickened ; there is a serous cyst on the external surface ; the papillæ are shown. The kidneys were inflamed ; the patient died from the effects of acute dropsy.
- 1305 A kidney of immense size, showing the effects of inflammation of its substance produced by the imprudent employment of tinctura lyttæ.

From a man 60 years of age, who had experienced great difficulty in voiding his urine ; at last he was distressed with retention, succeeded by incontinence. The incontinence, and the difficulty in voiding the urine became so distressing as to oblige him to apply to a surgeon, who prescribed for him *tinctura lyttæ* in large doses. The symptoms became more distressing after this medicine ; he had complete retention, and he was allowed to remain in this state nearly two days. I was then requested to visit the patient ; he appeared to be in agonising pain ; the bladder had ascended considerably above the pubes, and he complained of great pain when even slight pressure with the hand was made on this part of the abdomen ; he also said, " that the pain in his kidneys was very distressing." A catheter was introduced, and a considerable quantity of urine, mixed with blood, was drawn off ; it was very fœtid, and afforded great relief. The pain in the bladder and kidneys still continued, although various means were employed to lessen his sufferings ; the urine was drawn off twice a day ; it was generally mixed with pus, and the odour was extremely offensive. The patient continued in this miserable state for nearly three weeks ; irritative fever came on, which caused death.

The liver was very large and granulated. The bladder was very capacious, and contained about a pint and a half of an excessively fœtid fluid, which seemed to be urine mixed with putrid pus. The mucous coat of the bladder was sphacelated ; the prostate gland was greatly enlarged, particularly the middle lobe ; and the urethra was thickened by lymph. The kidneys were very large ; their capsules inflamed ; and they were separated from the parts they covered by pus. The cortical and medullary substances were softened, and appeared like a half unravell'd placenta ; this morbid change had been effected by pus deposited in the cellular tissue. The infundibula, pelvis, and ureters, were in a sloughing state. I never before examined such extensive lesion from the effects of inflammation and sphacelation in the urinary organs. How the

patient survived so long is quite surprising. I have always considered the administration of cantharides as a very dangerous practice, even in paralysis of the bladder.

At the Veterinary College, horses have died from inflammation of the kidneys and bladder from blistering with cantharides ; and the urinary viscera, on inspection, have exhibited the same morbid appearances as noticed in this case.

- 1306 A large kidney. The structure was highly inflamed, and there was a large collection of pus in the pelvis, and in the ureter.

Pus was also found between the external surface of the kidney and the capsula propria ; and the former was ulcerated, as seen in the preparation. The other kidney was affected in the same way. From a man who had a diseased bladder and prostate gland, which will be described.

- 1307 A kidney, the infundibula greatly dilated ; as was the ureter ; the internal surfaces immensely thickened by organised coagulated lymph.

The infundibula, pelvis, and ureter were filled with pus, and scarcely any of the natural structure remained. From a man. The bladder was highly inflamed, and there was a stricture in the urethra. The history of the case is not known.

- 1308 A kidney injected ; its natural structure nearly effaced by chronic inflammation ; there is a large serous cyst on the external surface, and scarcely a trace of the injection is visible.

- 1309 A kidney, the capsule greatly thickened, and its structure nearly destroyed by ulceration ; the infundibula and pelvis greatly dilated by calculi.

- 1310 A kidney, the infundibula dilated, the internal surface greatly thickened, and scarcely any signs of the natural structure seen ; the ureter, at its commencement, obliterated, which had caused the dilatation of the infundibular part ; the renal artery was converted into bone, and impervious.

From a man 70 years of age ; the history of the case not known.

- 1311 A kidney, its natural structure completely destroyed ; the infundibula dilated, and the internal surface greatly thickened ; the ureter obliterated at its

origin. From a man who had stricture in the urethra, and a diseased prostate gland.

- 1312 A kidney; the infundibula are greatly dilated, and their internal surface very thickly coated with organised coagulated lymph; the substance of kidney is absorbed, as seen in the specimen. The infundibula were filled with very thick pus, mixed with flakes of lymph, and the origin of the ureter was obliterated.

The brain became affected, followed by delirium, under which he died. The other kidney was only slightly diseased.

- 1313 A kidney; substance nearly absorbed in consequence of the ureter having been obliterated; this had occasioned inflammation of the pelvis and infundibula, thus forming a large abscess.

A portion of the duodenum adheres to the capsule of the kidney; a bristle denotes the ductus communis choledochus. The other kidney was not affected; the liver was granulated, and there was a considerable quantity of water in the abdomen.

- 1314 A kidney; a portion of the cortical and medullary structure destroyed by absorption; the pelvis and ureter dilated.

- 1315 A diseased kidney; the whole of the cortical and medullary substances have been absorbed, and only a shrivelled state of the infundibula and the pelvis remain, which are thickly coated with lymph; the ureter pervious; the other kidney presented the same appearance.

- 1316 A kidney injected. The arteries were injected with size and vermillion, the veins with size and Prussian blue. Scarcely any of the natural structure of the kidney is visible.

The patient, a man 45 years of age, had long suffered from the effects of stricture in the urethra; the prostate gland was destroyed; irritative fever came on, which occasioned death. See the description of this case in the Section on Morbid Bladders.

- 1317 Atrophy of the kidney. The infundibula dilated, and very little of the cortical part remains.

- 1318 Section of a kidney; structure highly inflamed and granulated.

- 1319 A granulated kidney, injected with size and vermillion. The patient a gin-drinker.

- 1320 Sections of two kidneys injected; structure granulated. There are also two kidneys, with the renal capsules, from a fœtus, in the same bottle.
- 1321 A kidney injected; structure granulated. From a man, a gin-drinker; the liver was granulated; there was a considerable quantity of water in the abdomen; the spleen was very large and dense in structure.
- 1322 Two kidneys, injected with size and vermillion, showing the granulated appearance which has been described by Dr. Bright, in his work on Disease of the Kidney.
From a dram-drinker.
- 1323 Section of a kidney, injected with size and vermillion. The principal part of this viscus was converted into a solid vascular tumor, the size of a very large orange, and was only covered by the capsula propria, which was thickened. I have never seen a specimen like this. Is it the vascular sarcomatous tumor of Abernethy?
- 1324 A kidney, affected with scrofulous tubercles. The patient, a young woman 19 years of age, had a diseased spine, and psoas abscess. The lungs were filled with scrofulous tubercles, and the mesenteric glands were affected with the same disease. Both kidneys were very large, and they contained tubercles of a scrofulous kind.
Symptoms of the disease had existed from the time of her birth.
- 1325 A kidney; natural structure nearly destroyed by chronic inflammation and scrofulous deposits. From a man, who died of phthisis pulmonalis; the other kidney was affected; also the mesenteric glands.
- 1326 Section of a kidney, with scirrhus tubercles. From a man 60 years of age. There was a large fungoid tumor near the dorsum ilii, on the right side. The mucous glands of the small intestines were affected with fungus hæmatodes; and the ileum and both the kidneys contained cancerous tubercles.
- 1327 Kidney of a Cat, with a large scirrhus tumor on its external surface. The omentum was affected with the same disease.
- 1328 A kidney divided, to show small carcinomatous tubercles in its internal and external structure. From a woman, who had cancer of the uterus.

- 1329 Section of a kidney, with carcinomatous tubercles in their incipient state ; the structure inflamed ; the other kidney was affected with the same disease, as was the liver.
- 1330 Section of a kidney, affected with carcinomatous tubercles ; the internal surface of the pelvis, infundibula, and ureter, in a sloughing state. From a woman, who had carcinoma of the mamma ; the kidney was affected with the same disease.
- 1331 A kidney, affected with carcinomatous and small medullary tumors ; the infundibula and pelvis greatly enlarged ; the capsula propria much thickened by lymph. The liver of this patient was affected with carcinoma and fungus hæmatodes ; also the mucous glands of the intestines ; and the gall-bladder contained calculi.
- 1332 Section of a kidney ; more than one half of its natural structure had been destroyed by the growth of a large fungoid tumor ; it possessed a capsule of condensed cellular tissue, which was covered by the capsula propria, the latter was greatly condensed, as seen in the preparation. The remaining portion of the kidney was healthy ; the liver was affected with fungus hæmatodes.
- 1333 Two sections of kidneys, affected with fungus hæmatodes ; the natural structure of one of them nearly destroyed by the morbid growths.
From a man. Many other parts of the body were affected with the same disease.
- 1334 Kidney, very large (injected), affected with fungus hæmatodes ; the capsule very dense. From a patient who had melanosis in the sternum. The history of this case is given in the Section on Diseased Bones.
- 1335 A portion of a kidney, converted into fungus hæmatodes and medullary sarcoma, which weighed nine pounds avoirdupoise ; the capsula propria immensely thickened.
The disease was supposed to be (from its occupying the principal part of the abdomen) tabes mesenterica. The kidney was injected with size and vermillion.
From a young subject.
- 1336 Section of a kidney, affected with medullary sarcoma and fungus hæmatodes. The other kidney was diseased.

- 1337 Section of a kidney. The kidney was of an immense magnitude, and was converted into medullary and fungoid tumors; all the natural structure had been absorbed. The capsule was greatly thickened, and externally resembled fascia.

From a patient 16 years of age, who had been out of health for several months. From the enlarged state of the abdomen, and the great emaciation of the body, the disease was considered to be *tabes mesenterica* by the physician who attended.

- 1338 A kidney, affected with medullary sarcoma. The right kidney seemed to occupy the greatest portion of the abdomen; the inferior part of the diseased mass rested in the concavity of the ilium, and the superior portion pressed closely against the under surface of the large lobe of the liver, and partly beneath the left, compressing the gall-bladder and ducts; the intestines were greatly displaced, but not diseased. The liver was pale-colored, but not unhealthy; the spleen much enlarged, and firmer in texture than natural. The pelvic contents and the thoracic viscera were normal.

The kidneys were removed for more minute inspection.

The right kidney weighed eleven pounds, thirteen ounces; it was formed into irregular protuberances, with the exception of a small portion, which retained the character of kidney. The capsula propria was greatly condensed; on cutting through the morbid parts, the cavity of the kidney seemed to be formed into an immense sac, containing a coagulum of blood (which weighed three pounds), and it was formed into concentrated laminæ, similar to that which is seen in large aneurisms; there were also nearly two pints of fluid in the cyst, which appeared like half-dissolved blood mixed with pus. The internal surface presented a ragged flocculent appearance, which was found to arise from coagulated lymph and numerous long and delicate blood-vessels.

The veins were filled with medullary matter; the remaining part of the kidney was composed of various sized medullary tubercles.

The left kidney possessed only a small portion of its natural structure, the other part being occupied by

pulpy tubera ; it weighed twelve ounces. The abdominal aorta was remarkably small ; the renal arteries were large, nearly equal to a large carotid. The pelvis of the right kidney was very capacious, the ureter small ; the renal artery was injected with size and vermilion and waxen injection ; some of the injection had passed into the cavity of the pelvis, which accounted for the repeated hæmorrhages during the patient's life.

From a female, 21 years of age, with a very delicate constitution ; from the age of 15 had menstruated with regularity. For several months she had experienced great pain in the loins, and difficulty in voiding urine ; the abdomen seemed to be enlarged ; and her health became affected. About a week prior to the regular menstrual period she was suddenly attacked with frequent desire to make water ; and, in the course of a few hours, an amazing quantity of limpid urine was discharged, without allaying the urgent propensity to void more.

The irritability of the bladder increased, and arterial-looking blood was discharged in considerable quantity ; but, as there was great uterine irritation, it could not be easily ascertained from whence the hæmorrhage proceeded. From the loss of blood and violence of the pain, she became extremely pale, pulse small and very rapid, the mind much agitated ; but there were no signs of syncope.

The acetate of lead and opium were given, and at proper intervals, infusion of roses ; cloths wrung out with vinegar and water were employed, which had the effect of lessening the hæmorrhagic action. After this, retention of urine came on, and the pain in the region of the bladder was so distressing as to render it necessary to draw off the urine ; nearly a pint and a half of blood, mixed with urine, were evacuated, which gave the patient great relief ; but it was necessary to repeat the operation for several days. The irritation of the bladder continued very violent ; the contractile efforts were frequent, and a considerable quantity of bloody fluid was discharged ; the regular menstrual discharge commenced, and she was greatly distressed with bilious vomiting.

From the continuance of the hæmorrhage, and the frequent sickness, it was imagined by all who saw her that she could not survive; she exhibited a ghastly appearance, yet her spirits remained remarkably good. By proper treatment the irritability of the stomach and bladder subsided; as did the hæmorrhage; and for six weeks she appeared to be in a convalescent state. The urine ceased to be tinged with blood, but it became turbid, and deposited a sediment like pus, and mucus. There was no material alteration in the symptoms, but progressive improvement of health for several months, when the patient was again attacked with violent bilious vomiting, and the bowels became irregular in their functions, and the excretions dark-colored.

She likewise complained of an obtuse pain in the right hypochondrium. On examination, I distinctly felt an enlargement of considerable magnitude, which extended from the false ribs on the right side to as far as the iliac fossa; slight pressure on this part produced pain, and considerable pulsation was felt, which the patient said had existed a long time.

The patient again rallied, and her health improved; but she complained of a dull pain in the tumor, also of a numbness in the right thigh and leg, and the pulsation in the tumor was more distinct.

After this period the abdomen began to increase daily, and she experienced great uneasiness in the hypogastrium; the bladder became extremely irritable, and she had almost constant desire to void urine. So violent were the efforts, that they resembled those produced by a calculus in the bladder; they were accompanied with the sensation of prolapsus uteri. A catheter was introduced, and upwards of a pint of thick bloody fluid was drawn off, which gave great relief; afterwards the contents of the bladder were expelled naturally, but with great pain, and generally mixed with a considerable quantity of coagulated blood.

Although the discharge of blood had been so very profuse, the tumor was not diminished, and it seemed to occupy the chief part of the abdomen;

the bilious vomiting recurred with more violence, rigors came on three times a day, succeeded by febrile action; the secretion of urine was scanty, but not tinged with blood; she gradually sank.

The case and dissection are fully described in the 8th Volume of the Royal Medico-Chirurgical Transactions.

- 1339 A kidney, affected with medullary sarcoma, injected with size and vermillion.

The history of this preparation is given in the history of No. 1338

- 1340 A diseased kidney, ureter, and bladder, with the uterus and part of the vagina.

From an incurable maniac, 55 years of age; the history of the symptoms not known. The kidneys were large, the capsules very dense; their external structure converted into medullary tubercles of a small size. The infundibula and pelvis were greatly dilated, and filled with a glairy secretion; and their internal surfaces were thickly coated with organised lymph; the medullary and portions of the cortical structure of the kidneys had been absorbed.

The ureters, from their commencement to their termination in the bladder, were greatly dilated; their coats were thick, and the internal surfaces presented the same morbid changes noticed in the infundibula and pelvis. The mucous coat of the bladder and urethra was highly inflamed, and coated with coagulated lymph; these appearances are seen in the preparation.

The uterus and its appendages were healthy. The lungs contained a number of medullary tumors, of various sizes; the abdominal viscera natural.

The membranes and structure of the brain were perfectly healthy, although the patient had been insane for several years.

On inspecting the brain of a maniac the membranes of the brain are often found thickened, or fluid is effused between them, or into the ventricles, or some lesion of its substance is seen.

- 1341 A kidney, affected with melanosis.

- 1342 A kidney; its size greatly diminished by chronic inflammation, and its internal structure affected with

melanosis; the renal artery is partly ossified, and tinged with melanosis. The patient was an old woman; the liver was partly affected with this disease. There are two large serous cysts in the external surface of the kidney.

- 1343 A section of a large kidney. The capsule greatly thickened; there was a large serous cyst on its external surface; it was cut open to show its size and density. On making a section of the kidney, its structure was found extremely dense; the papillæ large; the pelvis greatly thickened and dilated, and the ureter at its origin obliterated. The pelvis was filled with chalky matter, which accounted for the obstruction, and the dilatation of the pelvis. The patient, a man, had suffered several attacks of gout; the synovial membranes of the knee-joints contained chalky matter.

I have seen similar concretions in the bronchial glands of gouty subjects; also in the joints. Some of the preparations, from my collection, are in the Museum of the Royal College of Surgeons.

- 1344 Section of a kidney. The ureter obliterated, pelvis enlarged, as are the infundibula; the whole cavity filled with a soft chalky substance; the natural structure of the organ nearly destroyed.

The lining of the infundibula and the pelvis greatly thickened by chronic inflammation.

The capsules of the joints of the hands and feet contained chalky matter; this is said to be the urate of soda.

The patient, a man, had suffered severely from the effects of athritis for several years.

URINARY CALCULI.

- 1345 A kidney, injected with size and vermillion. The kidney appears very large, from the infundibula being formed into large sacs, occasioned by a calculus in the pelvis; the structure of this viscus is nearly destroyed; the lining of the infundibula and pelvis is inflamed; these appearances are well exhibited in the preparation.

From a woman, 63 years of age, who had suffered for

nearly four years from symptoms of nephritis. About six months previous to her death, the symptoms became more distressing; she complained of acute pain in the region of the right kidney, and great difficulty in voiding urine; it was sometimes mixed with pus and blood, and her health gradually declined. Every endeavour was employed to mitigate her sufferings.

The secretions from the kidneys began to diminish; the lower extremities became œdematous, succeeded by ascites; the pain in the kidney was greatly aggravated; she vomited frequently, and had great difficulty in breathing. With a view of affording the patient temporary relief, paracentesis was performed, and 26 pints of colorless fluid were drawn off. The dyspnœa and sickness abated after the operation; but the pain in the loins, more especially in the region of the right kidney, continued; and an enlargement of this viscus could be distinctly felt. The fluid in the abdomen again accumulated, causing the same symptoms; and, at the request of the patient, I performed paracentesis at the umbilicus with a lancet, this part having projected to a great extent; in the former instance it was performed two inches below this part.

The discharge of pus with the urine was very profuse, and the pain in the kidney more distressing, although large doses of opium, &c., were given; she gradually sank, and died.

The peritoneum was covered with coagulated lymph in a granulated state, the effects of chronic inflammation. The liver was extremely small and solid, and its edges obtuse; the peritoneal covering very thick; its substance presented what is termed a "nutmeg" like appearance. The right kidney was of the size and figure of an ostrich egg; it had ascended to the concave surface of the liver, and passed downwards as far as the spine of the ilium. In consequence of the magnitude of the kidney, the intestinum cæcum was pushed from its natural situation, and the right ovarium had formed a firm union with that portion of the peritoneum, which covers the kidney.

The kidney weighed, with the pus and the calculus,

2lb. 6 oz. The pus measured one pint. The other kidney was diseased, but a considerable portion of its natural structure remained; there was a calculus in the pelvis, which weighed 12 grains.

The lungs were healthy; also the structure of the heart; the valves of the aorta slightly ossified.

346 A kidney, with calculi in the infundibula, the pelvis dilated; the ureter was ulcerated at about an inch and a half from its origin by a calculus.

The patient, a man 55 years of age; had for nearly five years been afflicted with symptoms denoting diseased kidneys and bladder; he frequently voided a considerable quantity of mucus with his urine; it was sometimes mixed with pus and blood, and occasionally with uric acid.

The symptoms gradually increased, and he experienced great difficulty in voiding it. It was imagined by those who attended him that he had a calculus in the bladder; he was sounded by several able surgeons, and all declared him to be free from this disease.

About a month previous to his death, he was seized with pain in the region of the right kidney, which increased daily, and ultimately became agonising; he also complained of pain in the bladder and in the right testis. At last he was attacked with violent rigors, accompanied with febrile symptoms, and he died. The viscera of the thorax and abdomen were healthy. On reflecting the peritoneum to examine the kidneys, a considerable quantity of offensive fluid, like urine and pus, was found in the cellular tissue around the psoas muscles, as in lumbar abscess; there were also several small renal calculi mixed with the fluid. On inspecting the kidney on this side, its cavity contained a number of different sized calculi; the pelvis was dilated, and the ureter was ulcerated at about an inch and a half from its origin; this had been caused by the penetration of a calculus, which accounts for all the morbid appearances.

There were two calculi in the left kidney, but its structure was not diseased. The bladder was greatly distended with urine and coagulated lymph, and there were several small calculi in it; the coats

of the bladder were inflamed. The ureters were large. The prostate gland was perfectly healthy; but the urethra in its whole course was coated with lymph, and there were several small calculi found in the tube.

The patient had a fractured neck of the thigh-bone, within the joint; it was united by ligament, &c. A plate of this preparation is given in Sir Astley Cooper's valuable Work on Dislocations and Fractures of the Joints.

See the description of the thigh-bone in the Section on Fractures.

- 1347 A section of a kidney, with the abdominal aorta, taken from a young woman who died in St. Bartholomew's Hospital, of fever connected with purpura hæmorrhagica.

Preserved in alcohol.

Nearly the whole of the skin was affected with purpura hæmorrhagica; many of the spots were very large and distinct, in some parts confluent, and petechiæ were very numerous. The gums spongy, of a blue color, swollen, and bled copiously; and there was intestinal hæmorrhage a short time previous to death. The case was so far advanced when the patient was admitted into the hospital, as to afford no chance of recovery.

Inspection. All the viscera were loaded with blood, more especially the liver and lungs; and purple spots were seen beneath the serous membranes and the mucous coats.

The arteries were highly inflamed, more particularly the aorta and its branches; and there were a great number of purple maculæ between the coats, which are shown in the preparation. There was a considerable quantity of coagulated blood in the intestines. The mucous glands were not diseased. The membranes of the brain were extremely vascular, and water was found between them; the brain was inflamed, and all the blood-vessels gorged.

The patient was very plethoric; and as there were no signs of organic disease in any of the viscera; bleeding, purging, &c. at the commencement might have saved the life of the patient.

- 1348 Calculi, from the kidney.

- 1349 Renal calculi. From a man, 55 years of age, who had suffered severely for several years from symptoms of diseased kidneys and bladder.

Several distinguished surgeons had seen the patient, and each of them had introduced a sound, but did not ascertain the presence of a stone. The symptoms were imagined to be occasioned by an enlargement of the prostate gland.

I was requested to examine the body. The serous covering of the liver was thickly coated with organised lymph; its structure not much affected; there were several calculi in the gall-bladder.

The right kidney was greatly diminished in size, and its structure nearly destroyed by various-sized calculi; the internal surface was highly inflamed, as was the ureter. About an inch from the commencement of the ureter, an ulcerated opening was found, and several calculi had escaped from this opening beneath the peritoneum; an abscess had formed near the psoas muscles.

There were two calculi in the left kidney; the structure healthy. The bladder was greatly distended with a dark-colored fluid, mixed with a great quantity of coagulated lymph, and there were several calculi similar to those seen in the kidneys. The internal surface of the bladder was highly inflamed, also the ureters; the latter were greatly dilated, and calcareous concretions were deposited. The prostate gland was perfectly healthy; the urethra was thickly coated with lymph, and there were several small calculi in it.

- 1350 Calculi from a kidney. From a man, 74 years of age, who died of apoplexy. The infundibula and pelvis of the kidney were greatly dilated; the structure nearly absorbed, and the ureter obliterated by a large calculus which occupied a part of the pelvis and ureter; and there was also another calculus with sharp processes in the cavity of the kidney. The liver granulated; and there were several calculi in the gall-bladder; one the size of a pigeon's egg, weighed 310 grains, the other calculi weighed 8 grains.

The arachnoid and pia mater were thickened, and there was a considerable quantity of water between

them. The brain was inflamed; there were two ounces of water in the lateral ventricles; and in the centre of the right lobe of the cerebellum there was a coagulum of blood of about the size of a nutmeg, and water in the fourth ventricle.

The preparation of the brain is in the Museum of the Royal College of Surgeons.

1351 A renal calculus of considerable size; its external surface is very irregular, owing to small calcareous deposits. There was likewise a calculus in the urinary bladder. From an old woman.

1352 A renal calculus, which occupied part of the infundibula, pelvis, and ureter of the right kidney. From a man, 39 years of age, who had hydatids in the liver. The serous surface of the right lobe of the liver adhered very firmly to the diaphragm; and by the growth of the hydatids the peritoneal surface of the liver had ulcerated, also a portion of the diaphragm, which allowed some of the hydatids to escape into the substance of one of the lobes of the lung, and caused the death of the patient. The pleura pulmonalis adhered very firmly to the diaphragm.

The history of this interesting case is given in the Section on Diseased Livers.

1353 A great number of calculi, found in the pelvis of a kidney; they are very small, and composed of oxalate of lime. From a boy, 10 years of age. The kidney is of an enormous magnitude, the infundibula and pelvis greatly dilated, and the urethra, a short distance from its commencement, is obliterated by some of the calculi. The pelvis of the kidney contained a considerable quantity of urine, mixed with pus; and there were a great number of mulberry calculi in the cavity of the kidney, of various sizes. The preparation of the kidney and the remainder of the calculi are in the Museum of the Royal College of Surgeons.

1354 Section of a calculus, from the bladder.

1355 A calculus, showing a central nucleus.

1356 Section of a very large calculus. The external surface presents the mulberry character (oxalate of lime); the nucleus is shown in the preparation.

From a man, who had suffered from symptoms of

stone in the bladder for nearly 10 years, but would not submit to an operation; he committed suicide; and a few years previous to his death lost the sight of both eyes. The history of the case is given in the Section on Morbid Bladders, and the other half of the calculus is shown in the preparation.

1357 Section of a calculus, removed from the bladder.

There was considerable hæmorrhage after the operation, which was checked by filling the wound with lint, and applying cloths with vinegar and water.

The prostate gland in this case was diseased, and a considerable quantity of blood was mixed in the urine for some time previous to the operation. The patient soon recovered. The following is the chymical analysis of the calculus.

“The nucleus contains lithic acid and oxalate of lime, intermixed with a little phosphate and animal matter. The whole of the external part consists of the mixed phosphates, phosphate of lime, and triple phosphate of magnesia, and ammonia.”

1358 A vesical calculus. From a man, 46 years of age, who had a stricture in the urethra, and was tapped above the pubes. The history of this case is related in the Section on Diseased Prostate Glands, &c.

1359 A very solid and large calculus, which I removed from a boy 19 years of age.

The patient, at a very early period after his birth, had symptoms denoting stone in the bladder. His sufferings were, for several months previous to the operation, so distressing as to induce him to request lithotomy to be performed. There was considerable hæmorrhage, which was subdued by the application of cold water, and the patient soon recovered.

1360 A large oval urinary calculus, weighing eighteen drachms

1361 Small calculi, voided with urine at different times.

1362 Calculi, of various figures, which were discharged from the bladder at different times. From a man, who had long been afflicted with a renal complaint, and frequently voided similar calculi. The passage of the calculi through the urethra occasioned dis-

- tressing agony, and was generally accompanied by hæmorrhage.
- 1363 Calculi, voided with the urine. The urethra was dilated by bougies.
- 1364 Calculi, voided from the bladder, through the urethra, with considerable hæmorrhage. The patient had been long afflicted with arthritis.
- 1365 A calculus, which was expelled with the urine. From a man, 70 years of age, who had at different times voided similar calculi. He died in a fit of apoplexy. The body was not examined; had this been done, probably the kidneys would have been found diseased, and calculi in them and in the bladder.
- 1366 A calculus, voided through the urethra.
- 1367 Calculi, voided from the bladder.
- 1368 Calculi of various sizes. Some of them were voided with the urine; the others were taken from the bladder. The kidneys were diseased.
- 1369 Renal calculi, voided from the bladder. From a man, 70 years of age, who had for several years, at different times, passed similar calculi, which occasioned excessive pain; and the urine was frequently tinged with blood. He died of apoplexy; the body was not examined.
- 1370 Renal calculi, voided at different times from the bladder, the urethra having been greatly dilated by bougies.
- 1371 A large calculus from the bladder. From a man, 70 years of age, who had been tapped above the pubes. There were three calculi in the gall-bladder; two of them were very large. The case is given in the Section on Morbid Prostate Glands.
- 1372 Lithic acid.
- 1373 Lithic acid.
- 1374 A cast of a very large calculus, which was removed from the urinary bladder by J. Green, Esq. It has the external arrangement of the mulberry calculus, which is generally found to be composed of oxalate of lime.
- 1375 Cast of a mulberry calculus.
- 1376 A cast of a very large calculus, appearing to be formed by the union of three or four calculi. Lithotomy was performed by John Scott, Esq.
- 1377 Casts of four calculi from the urinary bladder. Three of them are large, one small.

- 1378 Cast of a very large urinary calculus.
- 1379 A large calculus, found in the bladder of a tortoise.
- 1380 A diseased bladder, from a boy, 10 years of age, who died on the fourth day after the operation of lithotomy. The operation was performed with a double-edged gorget, too wide, which had completely divided the membranous portion of the urethra. There was considerable hæmorrhage during, and after the operation; inflammation of the bladder and peritoneum supervened.
- All the coats of the bladder are greatly thickened, particularly the muscular, which probably had been occasioned by the calculus. The mucous coat of the bladder is highly inflamed, as was the whole of the peritoneum, the effects of the operation.
- 1381 Bladder and prostate gland. The bladder is greatly enlarged, the muscular and mucous coats thickened; and near its fundus lymph is deposited in considerable quantity between the serous and muscular coats, it is organised, and formed into a tumor. The anterior part of the bladder adheres very firmly to the periosteal covering of the internal surface of the ossa pubis. There are several calculi in the prostate gland. The disease in the bladder was occasioned by the wheel of a cart passing over the ossa pubis, which separated the junction of the bones. The patient suffered greatly after the accident from retention of urine, which required to be drawn off, and it was generally mixed with blood. About four months after the accident, he was able to walk, and attended to his business, but he continued to have great difficulty in voiding urine, and occasionally required the aid of a catheter. The patient was also very liable to attacks of catarrh, which had affected his voice, and a violent cold brought on pneumonia of a very distressing nature, which terminated in cynanche trachealis, and although very active treatment had been employed, the patient died.
- See the Section on Morbid Tracheæ, &c.
- 1382 Urinary bladder, from a woman, which burst in consequence of neglected retention of urine.
- The coats of the bladder were highly inflamed, and sphacelation had taken place to the extent of two inches, at its inferior and anterior parts.

The urine escaped into the abdomen, which induced peritonitis, and the patient died on the fourth day from the commencement of the attack.

- 1383 Bladder and prostate gland. The mucous coat of the bladder is greatly thickened by chronic inflammation, and there are several sacculi which had been produced by the difficulty in voiding urine. The natural structure of the prostate gland is nearly destroyed by scrofulous ulceration, the prostatic and membranous portions of the urethra are in a sloughy state, and there is a very small dense stricture at the bulb. The patient had also scrofulous tubercles in his lungs.

- 1384 Bladder, prostate gland, vesiculæ seminales, and vasa deferentia.

The bladder is very capacious, and extremely flaccid; the mucous coat is highly inflamed, and partly ulcerated. The prostate gland is enlarged to nearly double its normal size; structure very dense, the middle lobe is greatly enlarged, and the lateral portions project into the prostatic urethra, so as to diminish the caliber of the tube. The kidneys were inflamed, the infundibula, pelves, and ureters, greatly distended and highly inflamed.

A man, 73 years of age, had been afflicted for upwards of five years with nephritic symptoms. He was seized with retention of urine, and had not voided any for twelve hours, he complained of violent pain in the hypogastric region, and in the loins. He was informed that it would be necessary to have the urine drawn off, but this he would not submit to. Various means were adopted for some time to relieve the bladder, but without effect. His sufferings became very distressing, and the bladder had ascended nearly as high as the umbilicus; he was again urged to have the urine drawn off, which he agreed to.

There was some difficulty in introducing a catheter, owing to the diseased state of the prostate gland, but by depressing the instrument, and introducing a finger into the rectum; it was effected, and upwards of three quarts of offensive urine were drawn off. This afforded temporary relief, and the urine afterwards required to be drawn off twice

a day. Symptoms of cystitis came on, he complained of violent pain in the region of the bladder and kidneys; pulse extremely full. General and local bleedings, fomentations, &c. were employed. Irritative fever came on (which is an occurrence frequently noticed in patients afflicted with diseased kidneys, or bladder), and caused death.

1385 Bladder and prostate gland. There is a large calculus in the bladder, the other portion is described in the Section on Urinary Calculi.

The calculus is of an oval shape, it was placed with its long axis in the posterior and inferior part of the bladder, where it had formed a kind of pouch, which would have made the removal of it very difficult, if lithotomy had been performed. The calculus was composed of the oxalate of lime.

The patient, 59 years of age, had suffered from the effects of a calculus in the bladder for nearly ten years, but could not make up his mind to have an operation performed. During this period of time, he was so unfortunate as to lose the sight of both eyes; his mind became affected, and he committed suicide.

The vessels of the brain were very turgid with blood; the thoracic and abdominal viscera were very healthy. The bladder was firmly contracted, it contained three ounces of turbid, foetid urine, and a calculus the size of a hen's egg. The muscular coat of the bladder is very thick, the mucous surface not much altered in structure; the prostate gland is healthy. The kidneys were granulated, and the infundibula, pelvis, and ureters are greatly dilated.

1386 A bladder, prostate gland, and a portion of the penis. The mucous coat of the bladder is ulcerated, and in some parts sphacelated, and there are several sacculi in it; and in one of them on the right side, there is a calculus about the size of a large marble, which is shown in the preparation.

The prostate is not much enlarged, but in the right lateral lobe there is a renal calculus, which had caused ulceration of a portion of the prostatic urethra, and the stone is impacted in the substance of the gland. I have other specimens of a similar kind, which will be described. The whole

of the urethra is sphacelated. The kidneys were highly inflamed, and the infundibula and pelvis greatly dilated, and their internal surface presented nearly the same morbid appearances noticed in the mucous coat of the bladder.

The history of this case is not known.

- 1387 Section of a diseased bladder, prostate gland, and part of the urethra. The coats of the bladder are greatly thickened, the membranous portion of the urethra contracted, and the bulb rendered solid by coagulated blood, presenting an appearance of fungus hæmatodes.

- 1388 Bladder, prostate gland, and diseased urethra. The bladder was greatly distended with a thick dark-colored fluid, which emitted a very unpleasant stench. The whole of the mucous coat is separated from the muscular, as if sphacelated, and when put into water, a considerable quantity of black-colored fluid was given out, as in melanosis.

The prostate gland is affected with melanosis, and fungus hæmatodes, and the whole of the urethra is in a melanoid state. The right kidney was very soft, and of a blackish color, as was the lining of the infundibula, pelvis, and ureter; and there was a large quantity of dark-colored fluid in the pelvis of the kidney.

The left kidney was not much diseased. The mucous coat of the large intestines had a melanoid appearance.

The patient, 63 years of age, had been afflicted with disease in the urinary organs and prostate gland for several years. The symptoms increased, and he complained of great pain in the bladder, and considerable trouble in voiding urine, which was always loaded with mucus, and sometimes with a darkish fluid.

About a fortnight previous to his death, he complained of excruciating pain in the region of the right kidney, and the difficulty in voiding urine became more distressing.

Retention of urine came on, and it was necessary to introduce a catheter, and this was effected with great difficulty, the urethra being so extremely irritable from disease. In this state the poor fellow continued twelve days.

The urine was of a blackish color, as were the fæces.

I have several specimens of diseased bladder and prostate gland, showing the various morbid changes to which they are liable; but I never before saw any thing similar to the case I have just described.

From the melanoid color of the kidney, the mucous coat of the large intestines, and the state of the prostate gland, I think this was a case of melanosis connected with fungus hæmatodes.

The black appearance of the mucous coat of the bladder is not retained in the preparation, the fluid having escaped by macerating the parts in water.

1389 Diseased bladder, kidney, &c. The bladder is greatly thickened and contracted. There is a calculus in it of moderate size, and of an oval shape, and its external surface presented the mulberry character.

The internal surface of the bladder is remarkably thick, and the muscular fibres greatly developed. The left kidney was healthy, the right retained the lobulated figure, as in the fœtus, and there was a small calculus in the pelvis, which is shown in the preparation.

The concatenated absorbent glands on both sides of the neck, were enlarged, and converted into caseous matter, and the bronchial glands were affected with the same disease, which lessened the caliber of the bronchi.

The lungs contained scrofulous tubercles, but there were no signs of excavations. There was water in both sides of the thorax. There were some small tubercles on the pericardium; the heart natural.

The mesenteric glands were not affected, but the lumbar absorbent glands on both sides, were converted into large scrofulous tumors, some of which are preserved in the preparation.

The arachnoid membranes and pia mater were highly inflamed, and slightly thickened, and there was a serous effusion between the arachnoid and pia mater, and about an ounce of water in the lateral ventricles.

The vessels of the brain were surcharged, as were the sinuses, and the structure of the brain was of a reddish color, but there were no signs of tubercular

disease. From a boy, 14 years of age, had been in Cripple-gate Workhouse most of his life ; he had for a considerable length of time shown symptoms of organic disease in the lungs, and the glands in the neck gradually enlarged.

The tumors in the neck ultimately affected his respiration, and his lips were of a purple color ; he was troubled with a cough, and complained of head-ache, but he was not emaciated. About fourteen days previous to his death, symptoms of inflammation of the brain came on, which were succeeded by symptoms of effusion, and he died suddenly in a convulsive fit.

It is very singular that the patient never complained of any of the symptoms denoting a calculus in the bladder.

- 1390 A diseased bladder, prostate gland, kidneys, &c. The bladder is very capacious ; the muscular coat is flaccid, and the mucous surface near the prostate gland ulcerated. The prostate gland is not enlarged, but there is an abscess in the right lateral lobe, communicating with the urethra, (which contained pus, prostatic calculi, and a moderate sized urinary calculus), and there are calculi in the left lobe of the prostate. The substance of the left kidney had been nearly absorbed, there not being more than the pelvis and infundibula remaining. The pelvis and ureter on this side were immensely distended with pus, thickened, and the internal surface highly inflamed. The cause of these morbid changes was seen to have been produced by two large calculi in the ureter, about four inches from where the tube enters the bladder ; they are preserved in the preparation.

The right kidney, which had long performed the whole function of secretion, is large, its structure extremely soft ; the infundibula, pelvis, and ureter greatly dilated, thickened, and filled with urine, pus, and several calculi. The renal artery is very large, and there are two aneurisms, each about the size of a garden pea, which are shown in the preparation. The liver was very large and firm in texture. This patient had a large scrotal hernia ; and his death was occasioned by inflammation of the tunics

of the testicle, which produced sloughing of the tunica vaginalis, and the integuments of the scrotum. See the Section on Hernia.

The patient, 64 years of age, very corpulent, had lived luxuriously for many years. Symptoms denoting calculus came on, the urine was voided with difficulty, and it was frequently mixed with pus. Sir William Blizard sounded the patient, without detecting a stone. About a month after the sounding, two calculi were voided with the urine, about the size of a horse-bean. Probably the small size of the calculi prevented their detection, or they might have passed from the kidney into the bladder after the sounding.

The patient had suffered for a length of time, great difficulty in voiding fæces; an abscess formed within the rectum, which burst, and an immense quantity of pus was discharged, which afforded for a time great relief.

After this the urine was noticed to flow through the rectum, as well as by the urethra, proving that an ulcerated opening had formed between the bladder and the rectum.

The urine was voided in this way for six weeks, when it began to be discharged, but with great difficulty, from the natural passage.

He was attacked with a severe pain in the right kidney, accompanied with violent bilious vomiting, and singultus, and he had great difficulty in voiding urine.

Two physicians were consulted, who considered the case hopeless. I was requested to see the patient. He had stercoraceous vomiting, and all the symptoms of strangulated hernia. On inquiry, I ascertained that he had been afflicted with a hernia for several years, and had worn a truss. I found he had a large scrotal hernia, which with some difficulty I reduced, but a portion of the omentum adhered so firmly to the hernial sac, that it could not be returned into the abdomen. I applied a truss, so as to prevent the protrusion of the intestine without injuring the omentum, which relieved the distressing symptoms. From this time his health gradually improved, yet he occasionally had attacks

of vomiting and singultus, and his urine was mostly mixed with pus, sometimes small calculi were voided, and he complained of great pain in the region of the kidneys. These symptoms gradually increased, especially the nephritic, and the pain was agonising, although the warm bath and large doses of opium were employed to relieve his sufferings, but without effect. The pulse became hard and full, and the brain was affected. By bold bleedings, saline aperients, &c. the symptoms gradually subsided; the blood was buffed and cupped.

About a month after this severe attack, he began to complain of great pain in the kidneys and bladder, and he had great difficulty in voiding urine, several small calculi were voided, with some uric acid.

These symptoms were followed by an acute pain in the spermatic cord and testis of the right side, which increased rapidly, although leeches in great number were applied, fomentations, poultices, &c.

Symptoms of *hernia humoralis* came on, the integuments of the scrotum sloughed, and the testicle became exposed.

The opening between the bladder and the rectum had nearly closed, with the exception of a small sinus which is shown by a black bristle in the preparation. I have made the history of this case rather long, as I thought it singular, and very interesting.

- 1391 A bladder, shewing the effects of inflammation of the mucous surface, lymph having been deposited; there are likewise several sacculi, which were occasioned by retention of urine. There is an abscess in the right lateral lobe of the prostate gland; the left scirrhus. The kidneys were diseased; the description is given in the Section on Morbid Kidnies.

- 1392 Bladder, with the prostate gland, &c.

There are several sacculi in the bladder, two of them very large, and situated at the posterior part, a little above the termination of each ureter. The muscular fibres of the bladder are very large; the mucous coat healthy, although three calculi were found in the bladder.

There are also several calculi in the prostate gland, it is

not enlarged, but its structure is more dense than natural; which may have been caused by age, and the irritation occasioned by the calculi. The patient was 70 years of age; he had a large fungoid tumor near the dorsum of the ileum, and the kidneys were carcinomatous. See the Section on Morbid Kidneys. It was not ascertained before death that he had been afflicted with a stone in the bladder.

1393. A diseased bladder, urethra, &c.

The mucous coat of the bladder is greatly thickened, and a considerable portion of it near the prostate gland is destroyed, and its place supplied by verrucal growths, which must have impeded the discharge of urine.

The prostatic urethra is ulcerated; and there is a stricture at the bulb. The ureters greatly thickened and dilated, and the right one is obliterated. The kidneys were inflamed, the infundibula and pelvis very capacious. Nearly the whole of the surface of the urethra had been destroyed by the imprudent use of caustic, and different instruments.

1394. Diseased bladder, prostate gland, and a stricture in the urethra.

The prostate gland is converted into an immense mass, with various sized fungoid tumors, and some of a scirrhus density. The tumor had extended into the perineum, and occasioned an obstruction in the prostatic and membranous portion of the urethra; small tumors of the same character are formed beneath the mucous coat of the bladder, near its neck, and they extend into the prostate gland, which caused the impediment in expelling the urine, and the difficulty of introducing a catheter. The vesiculæ seminales and vasa deferentia are impacted in the morbid mass.

1395. Diseased bladder and kidneys, the external organs of generation and verge of the rectum preserved; there is also a large calculus, which was found in the bladder. The bladder is much thickened, and dilated. The right kidney is much larger than the left; the capsule thickened by chronic inflammation, and the cortical part altered in structure

by tubercles of a pulpy substance; the ureters were inflamed. The liver was very pale colored, soft in texture, and there was an hydatid in the left lobe of a moderate size. See the Section on Morbid Livers.

The membranes of the brain were highly inflamed, and there were six ounces of water in the ventricles.

The kidneys were injected with size and vermilion; the injection had not penetrated the depositions. It would be difficult to give a name to those morbid appearances; they had not the character of the medullary, or of the scrofulous tubera. Probably they were the result of chronic inflammation, which had been excited by the irritating causes which the calculus in the bladder had produced. In consequence of the extreme smallness of the vagina, and the minute opening of the meatus urinarius, the high inflammation, and the great sensibility of these parts, it was impossible to introduce the smallest sound into the bladder, to ascertain the presence of a stone; yet there had been all the symptoms denoting this affliction. If the operation of lithotomy could have been performed, the child would have died from the effects of the diseased kidneys; but if the operation could have been had recourse to before these viscera had become sympathetically diseased, the life of the child might have been saved.

The child was eight years of age; the calculus was about the size of a large nutmeg. Might not the hydatid in the liver and the calculus have been congenital? I once found a stone in the bladder in a still-born child.

The child died from the effects of the disease in the kidneys, but it had all the signs of hydrocephalus.

1396 A diseased bladder and urethra.

The bladder was greatly distended with a dark chocolate-colored fluid, mixed with a large quantity of coagulated lymph, and there were several calculi in it; both ureters were dilated, and the internal surface of the right was incrustated with calcareous matter.

Description of the preparation. The mucous coat of

the bladder is highly inflamed, and thickened with coagulated lymph; the muscular coat is also inflamed. The prostate gland healthy, but the urethra is thickly coated with lymph, which adheres firmly. The peritoneum on the right side, near the kidney, was highly inflamed. The cause of this appearance was ascertained on examining the kidney, which was thickly covered with adipose substance; the gland was greatly diminished in size, and its infundibula and pelvis were nearly filled with calculi of different sizes. The substance of the kidney, and the lining membrane of the pelvis, &c. were inflamed, and the ureter had ulcerated at about a quarter of an inch from its origin, and several renal calculi had passed through it, which had occasioned inflammation of the cellular tissue belonging to the psoas muscles. Suppuration followed, and formed an enlargement similar to a lumbar abscess, from diseased vertebræ. There were several calculi in the left kidney, and in the urethra. The liver was not much affected, but there were several calculi in the gall-bladder. The lungs and heart were healthy.

The patient, 55 years of age, had suffered greatly many years with an affection of the kidneys, and had been seen by several eminent surgeons.

The urine was mostly loaded with mucus, sometimes mixed with pus and calcareous concretions. A sound was introduced into the bladder, which gave the patient great pain, but no stone was detected. The rectum was examined by another surgeon, who imagined all the symptoms were occasioned by a diseased state of the prostate gland and the urethra.

The patient was suddenly seized with excruciating pain in the situation of the right kidney, the bladder, and the testicle; he had frequent rigors, and the quantity of urine diminished; fever supervened, and he died on the fifth day from the commencement of this attack.

Although this patient had been suffering severe pain such a length of time, and had been obliged to keep his bed during the greatest period of his affliction, yet he remained remarkably corpulent.

1397 Diseased bladder and urethra, &c.

The bladder is thickened and sacculated; the mucous coat inflamed; the prostate gland, and the inferior portion of the prostatic urethra is nearly destroyed by ulceration. There is a stricture of old standing in the membranous part of the urethra, and there were fistulæ in perineo. The crura penis are filled with alcohol. The patient had been subject to stricture for several years.

In consequence of effusion of urine into the cellular tissue of the perinæum and scrotum, sphacelation was occasioned, succeeded with fever, which caused death.

If the integuments had been freely opened when the effusion first commenced, the urine would have escaped, and the stricture might have been divided, and the stricture cured.

I have been successful in two similar cases, by this mode of treatment.

1398 A diseased bladder and prostate gland, one of the ureters is partly obliterated.

There was a considerable quantity of pus in the bladder. The mucous surface is highly inflamed, and partly ulcerated. The left ureter is completely obliterated by organised lymph to the distance of three inches from its entrance into the bladder. The prostate must have been of considerable size, but unfortunately the person who performed the post-mortem examination only removed one half.

The structure is more dense than natural, but not of a malignant character; the middle lobe is enlarged, and the right vesicula seminalis and vas deferens are completely obliterated by the growth of the diseased prostate gland. The left kidney was highly inflamed; the infundibula, pelvis, and ureter greatly distended by urine and pus, occasioned by the obliteration of the ureter near the bladder.

The patient, 30 years of age, had suffered severely for a considerable length of time, from a stricture at the membranous portion of the urethra. Inflammation of the bladder came on, which occasioned fever, and he died on the seventh day from the commencement of the attack.

1399 Diseased bladder, prostate gland, and a portion of

the penis : with a stricture in the urethra, and an artificial opening.

The bladder ascended considerably above the pubis, it was greatly distended with urine mixed with pus.

Description of the preparation.

The mucous coat is highly inflamed ; there are several sacculi in the bladder, one of them of considerable size, near the opening of the left ureter ; this is shewn in the preparation. The prostate gland is not enlarged (but pus was found in its structure), the prostatic and membranous portion of the urethra is ulcerated, and there is a dense stricture at the bulb, and an artificial opening near this part, which appears to have been made in endeavouring to pass a catheter into the bladder. The strictured part is nearly a quarter of an inch in length, and the whole course of the urethra, from the extremity of the penis to the strictured part, is greatly thickened, and altered in structure, partly by disease, and partly by the means employed to cure the stricture. The ureters were greatly thickened and dilated, as were the pelves and infundibula of the kidneys, and were distended with urine mixed with pus ; their internal surface was highly inflamed. The kidneys were remarkably small, and their structure presented a spotted or stellated appearance, such as I have frequently seen in morbid kidneys, which I believe is occasioned by excessive distention of the capillary vessels.

A man, 46 years of age, had suffered for a considerable length of time, all the symptoms attendant on a diseased state of the urinary organs, occasioned by a stricture in the urethra. Various means had been employed by several surgeons, to cure the disease, but without effect. Caustic had been freely used ; irritative fever came on, which caused death.

1400 Diseased bladder, prostate gland, and kidney. The bladder is immensely large, the muscular and mucous coats greatly thickened, and there are several large sacculi, which had been produced by the violent efforts at different times to expel

the urine. The third lobe of the prostate gland is greatly enlarged; the urethra not diseased, but a part of the membranous portion had been lacerated by too great force having been employed in attempting to draw off the urine with a silver catheter. The kidneys are greatly enlarged, one half of the right is converted into fungus hæmatodes, the other portion healthy; and there are some serous cysts on the external surface near the morbid mass, which are seen in the preparation.

The other kidney is not much altered in structure, but there are several serous cyts, beneath the capsula propria.

The pleuræ adhered firmly, but the lungs were healthy; there were three ounces of water in the pericardium; the heart was very large, the left ventricle capacious, parietes extremely thin, and structure very soft; the valves normal.

The arch of the aorta was greatly dilated; the coronary arteries partly ossified.

The liver presented a nutmeg-like appearance; the spleen was very large, and its capsule was partly cartilaginous. The abdominal aorta, and the vessels given off by it, were remarkably large, as were the iliacs, and the internal coat had a pearly white appearance, and was easily detached from the fibrous, which I consider to be the incipient state of aneurism. There was an aneurism by dilatation of all the coats in the right femoral artery, just where it gives off the profunda, &c.

The patient, 64 years of age, had been afflicted with difficulty in voiding urine nearly two years; the water was frequently mixed with blood; he had also experienced great pain in the loins. He was suddenly attacked with retention of urine; several attempts had been made to draw off the urine without the desired effect, and a considerable hæmorrhage from the urethra was produced. The bladder became greatly distended, and the patient was in great agony. I was requested to visit him: on examination I found the prostate gland diseased, and there was a considerable flow of blood from the urethra; as the bladder was so greatly distended, I thought the only chance of affording

relief would be by tapping above the pubes ; but before doing this, I considered it prudent to endeavour to draw off the urine with a catheter, I employed a very small elastic gum catheter without the wire, and by introducing a finger into the rectum, I fortunately passed it into the bladder, and a large quantity of urine was evacuated. The catheter was allowed to remain in the bladder, where it was properly secured, and the urine passed partly through the tube and partly through the urethra. This plan was continued for nearly a fortnight, when the catheter was withdrawn, and he afterwards passed urine without any aid ; his health then improved. About a year after this attack, he was seized with apoplexy, which produced paraplegia, and his mental powers were affected ; in another fit of the same disease he died.

This is a very valuable specimen.

1401 Urinary bladder, the prostate gland, and a portion of the penis. From a man who was tapped above the pubes. The ossa pubis, with part of the abdominal integuments, and the inferior portions of the recti abdominales muscles are also shown in the preparation.

The patient, 46 years of age, had been afflicted with a stricture in the urethra for several years, which could not be remedied ; retention of urine came on, with all its painful and distressing train of symptoms, and, as the urine could not be drawn off, the bladder was punctured above the pubes. Attempts were made during the artificial method of relieving the bladder, to re-establish the natural outlet for the urine, but unluckily for the patient this could not be effected. About three years from the time the operation was performed, symptoms of hepatic disease commenced, and it was noticed by his wife and family that his temper and mind had altered, and that he was disposed to be melancholy ; he put an end to his existence by hanging himself.

The membranes of the brain showed evident signs of having been affected for a considerable length of time ; the arachnoid and pia mater were thickened, there was a serous fluid between them, and nearly an ounce of water in the lateral ventricles.

The liver was very large, the veins turgid with very dark colored blood, its structure firm and granulated, as is noticed in those who have long been addicted to gin-drinking; and there were moderate sized calculi in the gall-bladder. See the Section on Biliary Calculi.

The spleen was rather larger than natural, and more dense in structure; the other abdominal viscera healthy, as were the thoracic.

Description of the preparation.

The bladder is capacious, but its muscular structure flaccid. The prostate gland is not diseased, but the mucous surface of the prostatic and membranous portion of the urethra is destroyed by ulceration. There is a stricture in the urethra near the bulb, which extends nearly an inch; its structure is very dense, and it was with the greatest difficulty that a very small bristle could be passed through it, (as is shown in the preparation), the natural structure of the internal coat of the urethra to the strictured part had been destroyed by the instruments employed in attempting to cure the stricture, and by the application of potassa fusa. I felt particularly interested in ascertaining the changes which had taken place after the operation, for the accommodation of the canula, never having had before an opportunity of examining a specimen of the kind.

The anterior part of the bladder adheres firmly to the inner surface of the pubis, also where the recti muscles are inserted; but the bond of union is the most complete in that part surrounding the opening in the bladder where the canula had been, which had completely prevented the effusion of urine into the adjacent cellular tissue, thus preventing inflammation and sloughing.

The communication between the abdominal parietes and the bladder are shown in the preparation.

The ureters, pelves, and infundibula were greatly dilated, which is generally noticed on inspecting these organs in subjects who have been long afflicted with disease of the urinary organs, and who have suffered frequently from retention of urine.

1402 Urinary bladder, the prostate gland, and a portion of

the penis, with the ossa pubis, part of the recti muscles and integuments. From a man who had his bladder tapped above the pubes.

The liver was large, of a deep yellow color, and granulated, and its vessels were greatly gorged.

The gall-bladder large, and it contained three large calculi, and several small ones. See the Section on Biliary Calculi.

The spleen was large, structure firm. The lungs healthy. The heart natural, the aortic valves at their base slightly ossified, as was the internal coat of the aorta.

The bladder is much contracted, yet its fundus is nearly three inches above the pubes. The muscular fibres of the bladder are extremely large, the mucous coat appears healthy, but formed into large rugæ; and there are several moderate sized calculi. The bladder contained about six ounces of what appeared to be mucus, mixed with calcareous matter in small granules.

Description of the preparation.

At the posterior and inferior part of the bladder there is a pouch, which contained a calculus about the size of a walnut. This was removed, and is described in the Section on Urinary Calculi. The prostate gland is greatly enlarged, its structure extremely dense, but not carcinomatous; the middle lobe protrudes into the prostatic portion of the urethra. The ureters, pelvis, and infundibula of the kidneys were greatly distended with urine mixed with pus, and the lining of these parts was highly inflamed; there were likewise calcareous depositions on it. The opening of communication between the integuments and the bladder, which was made by the operation, is shown in the preparation; likewise a tube or sinus, formed of dense cellular tissue, which surrounded the canula in the bladder, and prevented the urine escaping into the adjacent cellular membrane.

The patient, 70 years of age, had enjoyed a good state of health the greater part of his life.

In 1817, symptoms denoting diseased prostate gland came on; he had difficulty in voiding urine, accompanied with pain in the rectum. These symp-

toms slowly increased for nearly sixteen months, and blood was occasionally mixed with the urine. I was requested to see the patient: he informed me he had never been troubled with a stricture in the urethra. I examined the prostate gland, and found it greatly enlarged, and slight pressure with my finger excited great pain. I ordered leeches to be applied to the verge of the anus frequently, and medicine to keep the bowels in regular order, also suppositories.

This plan of treatment was pursued for some length of time with seeming benefit, but the difficulty in voiding urine became more distressing, and there was a considerable discharge of blood through the urethra; retention of urine came on, the bladder was greatly distended, and he experienced agonising pain. I endeavoured to introduce an elastic gum catheter into the bladder, but could not effect this, owing to the diseased state of the prostate gland; I also tried a silver catheter with a large curve, and introduced a finger into the rectum, but could not draw off the water. Tapping above the pubes seemed to be the only means of saving the life of the patient: but as I did not think it prudent to do this without the sanction of another surgeon, I requested Mr. Abernethy might be consulted. He endeavoured, for some time, to draw off the water, but finding this quite impossible, he assented to the operation.

I performed the operation, and upwards of two quarts of very foetid urine were drawn off, which afforded the patient great relief.

The canula was well secured by a bandage, and everything went on favourably; the wound in the integuments did not ulcerate, and there was no effusion of urine into the surrounding cellular tissue. On the sixth day after the operation the canula was withdrawn, lest calcareous matter should be deposited on it; another canula was introduced, constructed with a round point, large openings on each side, and a cock with a good valve, to let off the urine when necessary, which answered the purpose admirably. About three weeks from the time of the operation, the patient was attacked

rather suddenly with a violent pain in the right kidney and testis, which occasioned fever and delirium; the pulse was very full and hard, and a considerable quantity of pus passed off with the urine.

By general and local bleeding, and saline purgatives, fomentations, &c. the inflammatory action was in the course of a week subdued; his bodily power was greatly reduced, but he gradually recovered his health, and was able to attend to his business.

After keeping the canula in the bladder nearly six months, and the patient being in good health, and not having any symptoms denoting irritation in the bladder or kidneys, I thought it advisable to endeavour to pass a bougie into the bladder, which in the course of two months was effected; afterwards a moderate sized silver catheter, with a large curve, was employed. This point having been effected, the canula was removed, but as the bladder could not expel its contents, the catheter was obliged to be used twice a day; and in the course of a short time the patient was able to introduce the instrument, which he continued to do for nearly three years. He was again attacked with pain in the kidneys, the urine very thick and foetid; he also had some difficulty in introducing the catheter. These symptoms were made more tolerable by warm baths, keeping the bowels open, and by taking magnesia, liquor potassæ, &c. About a fortnight after this period, symptoms denoting a diseased state of the kidneys became more evident; he complained of a violent pain in the region of the right kidney, frequently accompanied with vomiting, and there was a considerable quantity of pus in the urine; he was also teased with tenesmus, and his health daily declined.

Symptoms resembling those produced by a calculus in the bladder came on; a sound was introduced, without detecting a calculus.

As the patient complained of great pain when the catheter was used, it was left in the bladder, which had the effect of discharging its contents. The aperture made by the trocar became partially open, and urine with pus were discharged through this part, as

well as through the catheter. A sound was introduced from this opening, with a view of ascertaining the presence of a stone, but with the same unsuccessful result as by the urethra. If a stone had been found, the high operation of lithotomy might have been performed by increasing the opening in the bladder above the pubes, with a blunt pointed bistoury. Irritative fever came on, which caused death. I have performed the operation of tapping the bladder above the pubes in four cases in men; also in a woman, who had a thickened and constricted urethra.

- 1403 Diseased bladder, prostate gland, with the penis. The bladder was tapped above the pubes. The muscular coat of the bladder is greatly thickened; the mucous surface nearly destroyed by ulceration, and partly in a sphacelated state. The prostatic and membranous portion of the urethra is completely plugged with blood, and portions of the sloughy mucous membrane, which probably had passed from the bladder; and there are also several small calculi. The bulb of the urethra is firmly compressed by a tumor, occasioned by a thickening of the cellular tissue, and pus was found in the centre of the tumor; there is an ulcerated opening between this abscess and the urethra. The pus in the abscess and urethra was very fœtid, and portions of the muscoli acceleratores urinæ were destroyed by ulceration.

The prostate gland is not much enlarged, but in the centre of each lateral lobe there is an abscess. The prostatic and membranous parts of the urethra are sphacelated; the rest of the tube is ulcerated, and greatly altered in structure. The ureters were considerably dilated, and filled with urine and pus; their internal surface highly inflamed, more especially the right, which was partly sphacelated at about an inch before it enters the bladder.

The kidneys were large, and soft in structure; their external surface, after the capsules were removed, presented a granulated appearance. The infundibula and pelves of the kidneys were dilated, and contained urine mixed with pus; and in the right kidney there were three small calculi, similar

to those found in the urethra. See the Section on Morbid Kidnies.

The penis is injected with size and vermillion.

The opening into the bladder is shown in the preparation.

From a man 40 years of age, who had been afflicted nearly three years with a renal disease. He had experienced great pain in the kidneys, his urine was generally very turbid, and he had constant inclination to void it; this was generally effected with difficulty, the urine was loaded with mucus, frequently mixed with calcareous matter.

The affection of the kidneys came on, shortly after a severe attack of typhus fever; he also had extensive sloughing of the nates and loins, which it was imagined would cause his death.

The disease in the kidney and bladder became very distressing; he voided urine with great difficulty, and it was generally mixed with pus, and sometimes with blood. Every endeavour was employed to relieve his sufferings, but without permanent effect. A large swelling was felt in the perineum, which he said had been forming for several weeks, and leeches, poultices, and various other means had been employed to reduce the swelling. Retention of urine came on, and the bladder became greatly distended; several attempts had been made to draw off the urine without effect.

I examined the tumor in the perineum, it felt very dense, and as no fluctuation could be distinguished, I did not cut into the tumor. I then attempted to introduce a catheter into the bladder, but this I found quite impracticable, the obstruction of the urethra being so great. I therefore decided on tapping the bladder above the pubes, to afford temporary relief. A considerable quantity of very thick offensive urine mixed with blood was drawn off, which mitigated his sufferings, and he became composed, and slept comfortably. The urine continued to flow through the canula, and he appeared doing more favorably than was expected for four days, when irritative fever came on, and he was so furiously delirious as to require the use of a straight waistcoat, and he died.

1404 A bladder, its fundus ruptured, the prostate gland diseased, and the urethra lacerated.

The bladder, although its fundus had sloughed to a considerable extent, is contracted into a small compass; the muscular coat extremely thick, the mucous surface highly inflamed, the urine had escaped into the cavity of the abdomen. The prostate gland enlarged, particularly the middle lobe, and the lateral lobes are spongy, and contained pus. The prostatic and membranous portions of the urethra are highly inflamed; and slightly ulcerated; and in the lateral part of the urethra, on the left side, there is an opening large enough to admit the point of a very large bougie, which I think was made by attempting to pass a catheter into the bladder.

The left ureter is greatly dilated, and thickened, and at about an inch from where it terminates in the bladder, there is a rounded dilatation in the tube, which is produced by an urinary calculus, of about the size and figure of a large prune stone. The ureter is greatly contracted near its termination, which induced me to imagine that the stone had lodged in this situation for a considerable length of time, and probably it never would have passed into the bladder. There was a considerable quantity of fluid in the abdomen, which smelt like urine. The peritoneum and its reflections were highly inflamed, which had been occasioned by the urine escaping into the abdomen. The kidneys were granulated; the pelvis and infundibula greatly dilated.

- 1405 A diseased bladder, and enlarged prostate gland. The bladder had been enormously distended with urine; the coats of the bladder are highly inflamed, and a portion of its fundus is lacerated, which allowed of the escape of urine into the cavity of the abdomen. The muscular fibres of the bladder are considerably elongated, and they are very flaccid. The prostate gland is enlarged to about three times its natural size, but the enlargement had originally taken place in the lateral lobes, the middle one not having increased in the same ratio. The left lateral lobe projects into the prostatic portion of the urethra near the veru montanum, which accounted for the difficulty the patient experienced for many years in voiding urine. The

kidneys were very large, they were highly inflamed, and the infundibula and pelvis dilated.

The abdominal viscera were generally normal, although the gall-bladder contained twelve various sized calculi, which looked like spermaceti, and there were two of the same kind in the ductus communis choledochus, also two were found in the duodenum, and all the biliary ducts were capacious. On the left side there was an inguinal hernia, which had existed for many years, but by the employment of a well-constructed truss, the intestine had been prevented from protruding, and the mouth of the sac was greatly contracted. On the same side there was a large hæmatocele, which is described in the Section on Hydroceles.

From a man 70 years of age, who had generally enjoyed good health, although he had at various times voided biliary calculi. He had experienced great difficulty in voiding urine for a considerable length of time, but about two years previous to his death the disease had increased, and there was occasionally blood in the urine. The patient had been under the care of several able surgeons, and it was ascertained there was an enlargement of the prostate gland, and that he was afflicted with what was supposed to be a hydrocele. He went into the country, where he was seized with retention of urine; a surgeon was called in, who made several attempts to draw off the urine, but without effect.

The patient was put into a warm bath, after this the urine began to dribble away, which seemed to afford relief; fomentations, and various other means were used, but the patient complained of great pain in the region of the bladder and kidneys.

The urine continued to pass away guttatim; vomiting came on, pain was felt over the whole of the abdomen, and the brain became affected. A physician was consulted; it was imagined to be a case of peritonitis, and treated accordingly. The patient died forty-eight hours from the commencement of the attack. I was requested to inspect the body. If the state of the prostate gland had been detected, and the symptoms denoting the retention of urine, probably the life of the patient might have been

saved, by drawing off the urine, or by paracentesis above the pubes. This is an interesting preparation.

- 1406 A diseased bladder, prostate gland, urethra, fistulæ in perineo and scrotum.

All the coats of the bladder are immensely thickened, the prostate gland enlarged, and as firm in texture as carcinoma.

The membranous and prostatic portion of the urethra are completely destroyed by ulceration; and there are several large fistulous openings in the perineum and scrotum, which are denoted by bristles; the integuments, and subcutaneous tissue belonging to these parts are greatly condensed.

A cat-gut bougie is introduced from the commencement of the urethra into the bladder, to show the morbid state of the urethra. Ulceration of the superior portion of the prostatic part of the urethra had been produced, which had proceeded upwards between the anterior surface of the bladder and the pubis, and the cellular connecting tissue is in a sphacelated state; the bladder adheres firmly to the periosteal covering of the superior part of the ossa pubis, as seen in the preparation. The kidneys and the internal surface of the ureters, pelves, and infundibula were highly inflamed.

The patient was 40 years of age; he died in an hospital. Various means of treatment had been employed, such as bougies and caustic, freely, without producing any beneficial effect.

This is the most complicated specimen of disease of the urinary organs I ever examined.

- 1407 A portion of bladder and urethra.

There is a very small stricture at the membranous portion of the urethra, which is shown in the preparation by a black bristle. The whole surface of the prostatic urethra ulcerated, and the lateral lobes of the prostate gland destroyed; there is a large fistulous opening in the middle lobe, which communicates with the urethra.

This is a very singular preparation. The history of the case is not known.

It would be difficult to decide whether the opening in the middle lobe was occasioned by disease or by the employment of a catheter.

- 1408 A diseased bladder and rectum. From a woman 60 years of age. The bladder is contracted, the mucous coat greatly thickened by chronic inflammation, and there are two ulcerated openings near the meatus urinarius, which communicate with the anterior part of the intestinum rectum; they are shown by two pieces of white glass in the preparation.

The verge of the anus, and to some distance beyond, is affected with carcinoma, and the mucous coat in some parts is greatly thickened and ulcerated; there are several fistulous sinuses in it, which are denoted by green-colored glass.

The uterus was affected with carcinoma. See the Section on Morbid Uteri.

- 1409 Bladder and rectum ulcerated.

A carcinomatous growth is formed in the cellular tissue connecting the posterior and inferior portion of the bladder, which had produced an opening of communication between the bladder and the rectum; the mucous coat of the former is inflamed and ulcerated.

- 1410 A diseased bladder, prostate gland, urethra, &c.

The bladder is immensely large, the muscular and mucous coats greatly thickened, more especially the latter. The lateral lobes of the prostate gland are converted into carcinomatous tumors of various sizes, and have formed a large mass, which lessened the caliber of the prostatic portion of the urethra. The internal surface of the whole of the urethra is highly inflamed, and a part of this portion had been lacerated, probably by a catheter. The cells of the bulb were filled with firm coagulated blood, and their structure thickened by inflammation.

The kidneys were affected with carcinoma; the infundibula and pelves greatly dilated. The patient was 60 years of age.

- 1411 Prostate gland, the vesiculæ seminales, and vasa deferentia. The prostate gland is not much enlarged, but its natural structure is converted into small cancerous tumors, and there are several prostatic calculi in the substance of the gland. The middle or third lobe is enlarged, and there is an opening

through its centre, large enough to admit a moderate sized bougie, which was made by too much force having been employed in introducing a catheter. The patient, an old man, died of apoplexy. The heart and liver were diseased; the kidneys granulated; the bladder very large; its muscular structure flaccid.

1412 Bladder and vesiculæ seminales.

There is a tumor about the size of a large orange between the muscular and mucous coats, near the posterior and superior part of the prostate gland. The growth of the disease and superior part of the prostate gland had caused absorption of the mucous coat which covered it, and the external surface of the tumor presents a fungoid character; a section shows the carcinomatous structure.

The terminations of both ureters are completely obliterated by the morbid growth; the disease in the right ureter extends upwards to about a quarter of an inch from the bladder; the prostatic portion of the urethra is nearly closed, and the right vesicula seminalis impacted in the disease. These appearances are well shown in the preparation. The prostate gland is healthy.

On dissection, a large accumulation of blood and urine was found beneath the peritoneum, in the right lumbar region, which had been occasioned by the bursting of the ureter.

The kidneys were of a pale white color, and the infundibula, pelves, and ureters, of an immense size. There were a few fungoid tumors in the lungs.

The patient was 68 years of age; he had suffered nearly eight years from symptoms of a diseased bladder. About six months previous to his death he experienced the most agonising pain in voiding urine, and it was generally mixed with blood; the brain became affected, and he died suddenly.

The history of this case is published in the 8th volume of the Medico-Chirurgical Transactions.

This is a very valuable preparation.

1413 Diseased bladder, with a carcinomatous and fungoid affection of the prostate gland, and a morbid state of the urethra

The bladder is considerably contracted, it contained about a wine glassful of fluid mixed with coagulated

blood ; the mucous coat is greatly thickened and inflamed, and the muscular tunic is very thick. At the posterior part of the bladder, there is a tumor equally large with the bladder itself.

On carefully examining this enlargement, it was found to be produced by the prostate gland which was converted into a fungoid and carcinomatous tumor, and the urethra presents an appearance resembling melanosis ; all these morbid changes are well preserved in the preparation. The kidneys were inflamed, as were the pelves, infundibula, and ureters ; the latter were greatly thickened, especially the left, which was distended with a bloody-looking fluid, the consequence of the entrance of the tube into the bladder being nearly obliterated by the pressure of one portion of the enlarged prostate gland. The absorbent glands in the pelvis and abdomen were converted into medullary and carcinomatous matter, and the veins in the pelvis were filled with fungoid deposits. The whole of the peritoneum was thickly coated with coagulated lymph. The liver and spleen were healthy.

All the coats of the inferior end of the stomach to the extent of four inches from the pylorus were greatly thickened by cancerous deposits between them.

The mucous surface close to the pylorus had been destroyed to the extent of a dollar.

The man, 45 years of age, had suffered severely nearly five years from symptoms of diseased bladder ; the urine was frequently loaded with mucus, sometimes tinged with blood.

From the difficulty of introducing a catheter into the bladder, it was imagined that there was a stricture at the membranous portion of the urethra ; he also suffered great pain in voiding fæces.

During the last six months of his life he had voided pus and blood per anum ; he became greatly emaciated, his complexion was sallow, and he complained of a burning heat in the region of the stomach, sickness, and great pain after meals.

There was considerable pulsation in the epigastric region, and he frequently vomited a coffee-ground looking fluid.

This is a very singular case.

See the description of the stomach in the Section on Morbid Stomachs.

1414 Diseased bladder, prostate, and a portion of the penis, with a stricture in the urethra.

The coats of the bladder are greatly thickened; the prostate gland is enormously enlarged by carcinomatous and medullary tumors.

The lateral and middle lobes are greatly increased; the caliber of the prostatic and membranous portion of the urethra is greatly diminished, and there are several bands of organised lymph in these parts of the canal, passing from one side to the other, similar to those seen between the pleuræ, as the result of inflammation.

The fundus of the bladder is about three inches above the ossa pubis, and firm adhesion had been effected between the cellular tissue of the anterior surface of the bladder, and the periosteal covering of the ossa pubis. The thoracic and abdominal viscera were healthy.

The patient, 70 years of age, had for several years been troubled with difficulty in voiding urine, owing to an enlargement of the prostate gland. He had a very large hydrocele on the right side, and one on the left; these had existed for several years, and had been tapped and injected. As the hydrocele did not increase, and only inconvenienced him by its bulk, it was not interfered with.

The difficulty of voiding urine became more distressing, and one day after drinking a considerable quantity of gin, retention of urine came on. Several attempts were made, by various sized catheters, without effect, to draw off the urine. The bladder having become greatly distended, and as the patient was suffering agonising pain, it was considered right to tap the bladder above the pubes; a large quantity of fetid urine was drawn off. The canula was kept in the bladder for a considerable length of time; the urine began to flow from the urethra, and there was also a discharge of pus, which induced me to attempt to pass a small elastic gum catheter into the bladder, which was effected, and a considerable quantity of urine, mixed with pus, was drawn off. The catheter was left in the bladder, and the urine passed partly through it and the urethra;

after this the canula was removed from the bladder, and the catheter being withdrawn, the urine flowed spontaneously.

His bodily powers gradually declined from the effects of old age, and he died.

About three years previous to his dissolution, he was attacked with osseous paronychia, the finger mortified, and produced sympathetic fever, which rendered it necessary to amputate it at about the middle of the metacarpal bone.

See the description of the finger in the Section on the Abnormal Osseous System.

1415 Bladder, penis, and a fungoid tumor in the perineum.

There is in the same bottle a portion of scrotum affected with carcinoma, and a diseased kidney.

The bladder contained a large quantity of thick foetid fluid, but the internal coat was perfectly healthy, with the exception of a vascular excrescence near the middle lobe of the prostate gland. The urethra was free from strictures, but its surface was highly inflamed near the prostatic and membranous portion; this had been occasioned by the morbid growth in the perineum. The tumor had extended into the pelvis on the left side, and had caused absorption of the periosteal covering of a part of the ramus of the ischium, and of the os pubis, and these bones were in a carious state. A section of the morbid part showed it to be composed of fungoid and medullary matter, with spiculæ of dead bone. The liver was very large, and contained a number of various sized medullary tubercles. The gall-bladder was filled with what appeared to be healthy bile; all the other abdominal viscera were healthy. The lumbar and pelvic absorbent glands were converted into large fungoid masses.

The patient, 50 years of age, was admitted into the sick ward of Cripplegate Workhouse, with what is denominated carcinoma scroti, it was on the right side, and had been increasing nearly eight months. It was of considerable size, the integuments surrounding it were everted, and there was a considerable discharge of ichor, and frequently of blood; the patient suffered great pain, and was anxious to have the disease removed. As he appeared in good health, and the spermatic cord and

the inguinal glands were not affected, I thought it right to operate.

The disease having affected the tunica vaginalis, I removed the testicle with the disease.

A section of the tumor presented a medullary substance with coagulated blood. Although the density was greater than that of brain, moderate pressure with the finger reduced it to a pulpy consistence. The patient appeared to be going on favorably for about a fortnight after the operation, and the integuments had healed, when he began to complain of a pain in the situation of the tuberosity of the ischium, and a considerable enlargement in the perineum succeeded.

The swelling increased rapidly, although every endeavour was employed to check its progress; he complained of great pain, and he had retention of urine, which required the use of a catheter; he had also great difficulty in voiding his fæces.

The integuments of the perineum assumed a purple hue, and presented the elasticity characteristic of a fungoid tumor. The pain in the tumor became so distressing, and the distention of the integuments so great, that I thought it right to make an opening into it to moderate his sufferings. After this a fungus of a sloughy appearance protruded. This growth increased, and the integuments surrounding it became absorbed.

His health was seriously affected, and the inguinal glands on both sides enlarged; the integuments were discolored. The enlargement in the perineum increased, and bled freely; sloughing took place, which was succeeded by irritative fever, and he died.

The testicle and the disease of the scrotum are preserved in the preparation. The history of the case is published in the 9th volume of the Royal Medico-Chirurgical Transactions.

- 1416 Prostate gland, affected with fungus hæmatodes, the middle lobe is greatly enlarged, which caused retention; this terminated fatally. The kidneys were affected with the same disease. From a very old man.

A sufficient quantity of the bladder and urethra had

not been saved by the person who examined the body.

1417 Bladder and prostate gland.

The bladder is very large, the muscular coat thick, the mucous membrane healthy. The prostate gland is not much increased in size, but it is converted into small medullary tumors, and some of them project into the bladder, near its cervix, which had occasioned great difficulty in evacuating the urine. The patient had suffered for nearly two years previous to his death.

The lungs contained several medullary tumors of different sizes; the trachea and bronchial tubes were inflamed, also the mucous coat of the ileum and cæcum; and the glands were greatly enlarged.

The patient was 34 years of age.

1418 Urinary bladder and prostate gland.

All the coats are greatly thickened, more especially the muscular, and the prostate gland is converted into medullary sarcoma. It had acquired a considerable size, and projected into the perineum. There were several large fungoid tumors in the liver; the rest of the abdominal viscera were healthy, as were the lungs.

The patient a boy, 8 years of age, had experienced for a considerable length of time great difficulty in voiding urine.

It was imagined that the symptoms were occasioned by a calculus in the bladder; a sound was introduced with great difficulty, this produced great pain and hæmorrhage, but no stone was detected. The enlargement of the perineum gradually increased, accompanied with great pain, and difficulty in voiding urine. The tumefaction was supposed to be produced by a collection of pus, deeply seated; a free opening was made into it, but there was no discharge of matter, and the wound bled freely. After this the wound became filled with coagulated blood, and in the course of four days, a bleeding fungous growth projected.

Fever came on, and the right thigh and leg became œdematous, which caused death. In local tumors it is sometimes very difficult to give a correct di-

agnosis of their character, particularly in the fungoid or medullary kind.

- 1419 Part of a bladder, with the prostate gland, vesiculæ seminales, vasa deferentia, and the penis.

There was a large aperture in the right side of the velum pendulum palati, which had healed; the turbinated bones had been destroyed.

The glans penis had been removed by syphilis, and the parts had healed favorably.

The prostate gland is not diseased; the vesiculæ seminales are shrivelled, and did not contain any fluid. The testes were greatly diminished, and their tunics firmly united, solid in structure, and there were no signs of tubuli seminiferi. The liver immensely large, of a yellow color, and the cellular tissue was greatly thickened, the effects of chronic inflammation; there were scarcely any signs of vascularity, and the serous coat was greatly thickened with organised lymph. The spleen was double the natural size, and its structure as firm as liver; the serous surface was thickly covered with coagulated lymph. The gall-bladder was distended with a sap-green colored bile, as were the cystic, hepatic, and common duct. The mucous glands of the small intestines were greatly enlarged, and the mucous surface in several parts ulcerated. All the thoracic viscera were healthy, except one of the lobes of the right lung, which was hepatised.

The preparation of the pharynx and larynx from this patient is in the Museum of the Royal College of Surgeons.

- 1420 A diseased prostate gland, the penis injected with size and vermillion.

The bladder was extremely large, the muscular fibres very flaccid, and there were several large sacculi.

Description of the preparation.

The mucous coat is greatly thickened by chronic inflammation, and the prostate gland is immensely large, particularly the middle lobe; the structure is dense, and the caliber of the prostatic urethra diminished by this growth. There is likewise a large opening through the centre of the middle lobe, about two inches in length, which had been

made by the introduction of a catheter. Several portions of the urethra show the effects of chronic ulceration.

There were several phlebolites in the veins, near the prostate gland, some of them are shown in the specimen.

The kidneys were granulated, and the pelves and ureters considerably dilated. There was a considerable quantity of water in the right side of the thorax; the lung was œdematous, and there were firm adhesions of the pleura in the left side; the lung was loaded with serous infiltration. The heart was large, its muscular structure soft, cavities very capacious; the valves were healthy, an occurrence seldom noticed on inspecting old persons.

The arch of the aorta was very large, it might be termed aneurismal, all the branches given off at this part were very large, and the internal coat was converted into bone and cartilage. The valves of the aorta were only slightly thickened at their base, but the coronary arteries were considerably diminished in their caliber by osseous depositions.

The liver was very soft, and sections of it presented the appearance of a sliced nutmeg.

There were several large calculi, of various shapes, in the gall-bladder. See the Section on Biliary Calculi. The ductus cysticus and communis choledochus were greatly dilated, probably by the passage of calculi into the duodenum.

The spleen was large, its structure extremely soft, and the pancreas healthy.

The abdominal aorta was very large, and the internal coat ossified; the iliac arteries were aneurismal, the coats converted into solid bone; the femoral arteries were obliterated by coagulated blood, which occasioned gangrena sicca, and the death of the patient.

CASE.—A man, nearly 90 years of age, tall in stature, and in his younger days very athletic; he had lived freely the greatest part of his life.

I was requested to visit the patient, and found him distressed with symptoms of retention of urine; he informed me that he had for many years experi-

enced great difficulty in voiding urine, and it was occasionally necessary to have it drawn off with a catheter; in consequence of his having a diseased prostate gland, there was great difficulty in introducing the instrument, and frequently hæmorrhage succeeded.

Previous to my introducing a catheter, I examined the state of the prostate gland, which I found greatly enlarged, and pressure with the finger produced considerable pain. I employed a catheter with a large curve (which I generally use in those cases) and detected an interruption at the prostatic portion of the urethra; there was difficulty in passing the instrument into the bladder. Three pints of very fœtid urine were drawn off, but in consequence of the bladder having been so greatly distended, and the length of time it had been retained, it became paralysed, and never recovered its function; it was necessary, therefore, to employ a catheter twice a-day, for a period of nearly four years. During the latter part of his life he frequently experienced great pain in the bladder and kidneys, if the urine were not drawn off at the usual period; and the odour of the fluid was very offensive, it was frequently mixed with pus, sometimes with uric acid. About two months previous to his death, the inferior extremities became very cold; the integuments of the feet presented a purplish hue, and pulsation could not be felt in the popliteal arteries, or those belonging to the legs. Sphacelation of the feet commenced, succeeded by irritative fever, which caused death.

- 1421 Prostate gland, vesiculæ seminales, and vas deferentia.

The prostate gland divided by Mr. Stanley's gorget.

PROSTATIC CALCULI.

- 1422 Prostatic calculi.

- 1423 Prostatic calculi.

- 1424 Prostatic calculi.

The last two specimens from an old man; the kidneys were diseased, and there was a large calculus in the ureter of one of them. The history of this case is given in the Section on Diseased Kidneys.

MALE ORGANS OF GENERATION.

Human—Normal, and Morbid.

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- 1425 A section of a penis; the crura and corpus spongiosum urethræ injected with size and vermilion.
- 1426 A section of a penis, the crura inflated.
- 1427 A portion of a penis, the corpus cavernosum and the corpus spongiosum urethræ filled with wax injection, also the arteria dorsalis penis.
In consequence of the man having had a chancre near the corona penis, which had destroyed a considerable portion of the glans, and had healed; the injection had not entered into this part, which is shown in the preparation.
- 1428 A section of a penis, the urethra lacerated by a bougie. The orifices of the arteries belonging to the crura are shown by black bristles.
- 1429 A portion of the penis. Chancres had formed on the corona glandis, which had destroyed a portion of the corpus cavernosum, and had formed an aperture at the superior part of the urethra; the whole of the prepuce was destroyed, as is seen in the preparation. The parts had healed completely, except the aperture at the upper part of the urethra, and the urine was voided principally from this opening, which annoyed the man greatly.
- 1430 Glans penis, and a portion of the urethra, and the corpus cavernosum, showing the effects of syphilis. Several other parts of the body were affected with this disease. Mercury had been, in this case, too freely employed.
- 1431 Verrucæ removed from the corona glandis penis by excision; there was profuse hæmorrhage, which was suppressed by spirit of turpentine and lint.
- 1432 Part of a penis injected with size and vermilion, showing the effects of sloughing phagedæna. The patient, 49 years of age, had from birth a con-

stricted prepuce (phymosis), a discharge commenced about a week after improper intercourse; the prepuce became inflamed, accompanied with great pain and considerable swelling, which obliged the patient to ask the advice of a surgeon.

The symptoms were supposed to have been produced by a chancre, and mercury was given in such doses as to quickly produce ptyalism. This plan of treatment had no effect in checking the progress of the disease, but on the contrary aggravated it, and mortification of the prepuce came on to a considerable extent, which soon exposed the glans penis. It was enormously swollen, and there was every reason to suppose the part would sphacelate. At this period I was requested to visit the patient; he was in agonising pain, and his health was greatly affected. I ordered opiate lotions to be applied frequently, and liquor opii sedativus to be given in mint julep every four hours; afterwards sarsaparilla and a nutritious diet. This plan was pursued a week, with beneficial effect, as his health improved, the mortified parts began to separate, and the surface of the part assumed a more healthy appearance.

The wound healed gradually, but the inferior part of the prepuce remained, and its sub-cellular tissue had been greatly thickened by organised lymph, which had produced an enlargement nearly the size of the glans penis.

About six months after the healing of the sore on the penis, symptoms of phthisis pulmonalis came on, which caused the death of the patient.

The liver was sound, although a little more solid than natural; the rest of the abdominal viscera were healthy. There was a considerable quantity of pus in the left side of the chest, and there were large excavations in the lungs; and the lung on the right side was emphysematous. The lining of the trachea and bronchi was highly inflamed.

- 1433 Penis and inguinal glands affected with carcinoma. A man, 55 years of age (several years ago) was admitted into Saint Bartholomew's Hospital, with what was supposed to be pseudo-syphilis. There was a foul ulcer round the whole of the corona

glandis ; he complained of great pain, and the glans was greatly swollen and inflamed. The part was fomented and poulticed, and mercury given till salivation was produced, which did not check the morbid action ; the ulcerative process increased, the whole of the glans penis became greatly enlarged, the integuments were highly inflamed, and his health was seriously affected. The patient was removed from the venereal ward ; the mercury was discontinued, and cinchona, acids, &c. were prescribed, with nourishing diet.

Sloughing of the glans penis supervened, and in the course of a few months the whole of the penis as far as the pubis was completely destroyed.

The absorbent glands in both groins became painful, and enlarged ; the integuments were greatly inflamed ; mortification ensued, and exposed the femoral arteries and veins, but their external coat being well defended by organised lymph, was protected from ulceration ; some of the arteries were obliterated by lymph, and the internal iliac vein was filled with coagulated lymph, which adheres firmly to the internal coat.

At this time the disease was considered to be of a malignant character. He was discharged from the hospital incurable, and afterwards admitted into the sick ward of Cripplegate Workhouse. The poor fellow was in a very deplorable state ; all that could be done in this case, was to sooth his sufferings by opium. Carrot poultices were applied to the sores, and he was allowed nourishing food. In this state he remained nearly four months, when symptoms of disease of the lungs came on, which caused death.

Inspection. The absorbent glands on both sides of the pelvis and spine were affected with carcinoma, and there were tubercles of a similar kind in the lungs. The remaining portion of the penis, with the membranous and the prostatic part of the urethra, and the prostate gland are shown in the preparation. The gland is not diseased.

The testes are also preserved, they are rather small, but their structure appears natural ; and in consequence of the right spermatic chord having re-

tracted, the testicle is placed close to the external abdominal ring.
This is a valuable preparation.

HYDROCELES.

- 1434 Hydrocele, testicle shown, the vas deferens and the vessels of the spermatic cord.
- 1435 A hydrocele with the testicle and spermatic cord. The tunica vaginalis and albuginea were greatly thickened, the former coated with lymph. A chronic hydrocele, which would not, I think, have been cured by injection. The testicle is partly shown and unravelled.
- 1436 A chronic hydrocele, the tunica vaginalis thickly coated with organised coagulated lymph. The tunica albuginea remarkably dense in structure, and the testicle nearly destroyed by carcinoma. From an old man.
- 1437 A large chronic hydrocele, the internal surface thickly coated with organised lymph; there are two long round bands of adhesion on its surface, which are shown in the preparation.
The testicle is partly unravelled.
- 1438 A large hydrocele, with the spermatic cord and the testicle. The tunica vaginalis was not opened.
- 1439 A hydrocele, the tunica vaginalis thickened, and the tunica albuginea very dense; the structure of the testicle more solid than natural, from the effects of inflammation and effusion of lymph.
The vas deferens and spermatic vessels are shown in the preparation.
- 1440 A testicle, injected with size and vermillion; the vessels of the spermatic cord shown, &c.
The patient had a scrotal hernia on the right side, which had been increasing nearly twelve months, and had acquired a considerable magnitude; he had likewise on the same side a large scrotal and femoral hernia, and an inguinal hernia on the left side. The herniæ had never produced any unpleasant symptoms.
The scrotal hernia was reduced by an assistant;

paracentesis was then performed, and nearly two pints of fluid were evacuated.

In the course of three months the hydrocele increased to a considerable size, and the operation was required to be repeated every four months for nearly three years. The patient having become dissatisfied with the incumbrance which the enlargement occasioned, and the necessity of submitting to so many operations, felt anxious to have something done to produce a permanent cure. I described to him the uncertainty of effecting a cure by injection in a chronic hydrocele, and likewise stated to him the dangerous consequences resulting from this plan of treatment at an advanced period of life; he was still anxious to have the trial made. I tapped the hydrocele, and drew off nearly a pint and a half of transparent fluid, and afterwards injected the same quantity of a solution of the sulphate of zinc, in the proportion of a drachm to two pints of water. A few hours after the operation, the patient began to complain of pain in the testicle and spermatic cord; the testicle appeared to enlarge, as in hernia humoralis in a severe case of gonorrhœa.

Leeches were frequently applied with cataplasms, and medicines were given to subdue the inflammatory action; but without effect. The pain in the testicle was very distressing; the swelling more considerable; the integuments of the scrotum and spermatic cord greatly increased in temperature, and the febrile symptoms most distressing. These symptoms in spite of active treatment, continued nearly a week; the integuments of the scrotum became very red; the cutaneous veins were greatly dilated, and a sense of fluctuation was detected, which seemed to be the effects of secretion into the tunica vaginalis.

The symptoms becoming more alarming, similar to such as I have seen in irritative fever; I did not hesitate to make an opening with a double edged scalpel into the tunica vaginalis, which was followed by the discharge of four ounces of pure pus. The result was, that the symptoms gradually subsided after this operation, and by proper attention to his health, he soon recovered. And it was most gratifying to my feelings, that a perfect union of the tunica vaginalis and albuginea had been pro-

duced. During the last three years of his life his mental and bodily powers gradually declined, the result of old age, and he died in the 77th year of his age.

The sac of femoral hernia and the ring were very capacious ; the internal surface presented its normal character ; the sac of the scrotal rupture had not undergone any morbid change, nor had the inguinal on the left side. There were three ounces of fluid in the tunica vaginalis of the left testis ; the structure of the gland was perfectly healthy, as was the epididymis ; and the vas deferens and spermatic artery were pervious.

The tunica vaginalis and albuginea were greatly thickened, and lymph had been deposited, which was organised, and a firm bond of adhesion between the two surfaces had been effected. I have examined a number of hydroceles, some of which had been injected, but I never saw such complete union of the two secreting surfaces as was shown in this instance. Generally, hydroceles which have been injected are found to be only partially agglutinated. My motive for wishing to make this case public, is to prove that a perfect cure of hydrocele may be effected in persons advanced in life ; yet, from the severe symptoms which were occasioned in this case, I should not recommend such a mode of practice.

It would be more advisable to perform paracentesis whenever the accumulation in the tunica vaginalis testis became troublesome to the patient.

The history of this case, with observations, was published in the *Lancet*.

- 1441 Two testes. The structure of one is completely destroyed by large scrofulous tubercles, the tunica albuginea and vaginalis, and the scrotum are partly destroyed by ulceration, and the scrofulous growth projects ; the spermatic cord is likewise affected.

The other testicle partially affected with scrofula, and there was a chronic hydrocele.

A man, 34 years of age ; the lungs contained a great number of scrofulous tubercles, and the mesenteric glands were converted into caseous matter. In con-

sequence of the patient's bad state of health, an operation was not proposed.

1442 A chronic hydrocele, the internal surface greatly condensed by chronic inflammation, and there are two solid tubercles on it, about the size of a hemp-seed, which are shown in the preparation; the testicle is carcinomatous.

1443 A large collection of fluid in the spermatic cord, which in figure and size exactly resembled a large hydrocele, extending as high as the ring of the external oblique muscle. This was previous to the man's death considered a hydrocele, and tapping was proposed, but he would not give consent. The tunica vaginalis having been cut open, that and the tunica albuginea were seen in their natural state without any fluid between them; the testicle was healthy.

The testicle was not situated at the posterior part of the sac containing the fluid, as is mostly noticed in hydrocele, but it was in the most inferior part. The vas deferens and spermatic vessels were widely separated, the cremaster was not expanded. If the collection of fluid had been evacuated, and afterwards injected, as for hydrocele of the tunica vaginalis, the inflammation of the cellular membrane would probably have occasioned serious mischief?

1444 A hæmatocele. There was a large quantity of coagulated blood and lymph in the tunica vaginalis, and the internal surface was thickly coated with lymph; this is shown in the preparation.

The tunica vaginalis was remarkably thick; and what is very singular, the testicle was situated at its superior and posterior part, it was healthy, but extremely small, a change produced by age. This patient had a diseased prostate gland, which occasioned retention of urine; the bladder gave way at its fundus, which caused death. See Section on Diseased Bladders.

The hæmatocele was considered to be an hydrocele, by a surgeon of considerable eminence, who proposed tapping. A consultation took place, it proved a case of hæmatocele, and an operation ought not to have been performed.

This is a very valuable preparation.

TESTIS.—*Normal and Morbid.*

- 1445 Testicle, the tunics, and part of the spermatic cord.
- 1446 Testicle, the tunica vaginalis, and albuginea opened, to show the structure of the testis.
- 1447 Testicle, tubuli seminiferi, partly unravelled; the tunics and spermatic cord shown.
- 1448 Testicle, the tunica vaginalis and albuginea shown; also the dense cellular tissue which surrounds the external surface of the tunica vaginalis and spermatic cord. The globus major and minor are shown; also the vessels and nerves of the cord and the vas deferens.
- 1449 Testicle, tubuli seminiferi unravelled, &c.
- 1450 Testicle injected with quicksilver.
- 1451 Testicle, the vas deferens, and epididymis injected, dried and preserved in spirit of turpentine.
- 1452 Testicle, vas deferens, and epididymis injected, dried and preserved in spirit of turpentine.
- 1453 The inferior parietes of the abdomen, with a testicle within the cavity.

From a child, 5 years of age, who died on the 10th day from the commencement of an attack of acute hydrocephalus. The arachnoid membrane and pia mater were highly inflamed, and pus had been secreted between them. There were four ounces of water in the ventricles of the brain.

The liver was not diseased, but the peritoneal covering of this viscus, as well as that of the rest of the abdomen, were studded with small scrofulous tubercles. There were several similar tubercles in the liver and pancreas. The left testicle was found in the abdomen about an inch above the internal ring; the opening was very large, as is seen in the preparation, and a process of the peritoneum had protruded through the external ring. Probably the testicles had occasionally passed through the rings, and receded, as they sometimes do in young boys. The right testis was considerably more developed, and had descended into the scrotum.

- The anatomy of the parts is shown in the specimen.
- 1454 A testicle, with its tunics and the spermatic cord; the tunica vaginalis cut open, to show the figure of the testis, &c. and a small growth on the tunica albuginea, near the base of the globus minor.

- 1455 A testicle; the tubuli seminiferi partly unravelled; the tunica vaginalis and albuginea considerably thickened, and firmly united; the epididymis destroyed by mortification. The vessels of the spermatic cord are shown in the preparation.
- 1456 A testicle and spermatic cord; the structure of the testicle rendered solid by inflammation, &c., the effects of an injury.
- 1457 A testicle affected with scrofula and carcinoma, and serous cysts in the spermatic cord. The parts were injected with size and vermilion from the spermatic artery; there were several large serous cysts (not hydatids) in the spermatic cord.

On cutting open these cysts, their internal surface was found to be minutely injected; this great vascularity accounts for the rapid secretion of the fluid which so frequently took place. The spermatic artery was very large, and the vas deferens was pervious as far as the epididymis. The tunica vaginalis and albuginea were greatly thickened by chronic inflammation, and they were firmly adherent. There were no signs of the natural structure, and scarcely any appearance of vascularity. The morbid productions were composed of scrofulous tumors, and the external surface presented all the characteristic signs of carcinoma.

The patient was 30 years of age; the disease in the testicle had been progressively increasing for nearly twelve months, and had affected his health, although he had had the advice of some of the most distinguished surgeons in London, and various means had been adopted to cure the disease, but without effect. When I saw the patient the testicle was of an immense size, and felt dense and ponderous. There was considerable enlargement of the whole of the spermatic cord; the integuments of the scrotum were of a purple color, the veins were greatly distended, and very tortuous, and meandered over its surface, similarly to what I have generally noticed in fungoid tumors. The inguinal glands were not affected.

Leeches were applied frequently; iodine was taken, and employed externally for a considerable time, and his digestive organs attended to, but without producing any beneficial effect.

The spermatic cord increased in size, and presented all the appearance of a hydrocele in this part; as the patient complained of great pain in the cord, paracentesis was performed, the fluid discharged resembled that of a hydrocele in the tunica vaginalis. The operation lessened the pain and tension, but the fluid soon accumulated again, and the operation was obliged to be repeated a great number of times. A seton was introduced into the scrotum, which produced a considerable discharge, which was continued for a length of time, but as it did not appear to alter the morbid growth of the testicle, it was discontinued. As his health began to decline, and he had a sallow complexion, it now became a question whether it would be right to propose the removal of the testicle. Sir Astley Cooper was consulted, and gave his opinion that the operation should be performed as soon as possible, with the hope of saving the life of the patient. I performed the operation on the 23d of November, 1835; he soon recovered his health, and he is at the present time, 17th July, 1839, free from disease.

In consequence of the great degree of enlargement of the spermatic cord, even within the external ring, the operation was rendered difficult, and very tedious. This is an unique preparation.

The history of the case was published in the *Lancet* in 1835.

1458 A testicle affected with carcinoma.

The morbid action had caused partial absorption of the tunica albuginea, and had protruded between this coat and the tunica vaginalis; the internal surfaces of these coats were thickly coated with organised lymph. A bristle is placed in the vas deferens. The glands in the groin were affected with carcinoma.

1459 Testicle affected with carcinoma; the tunics are immensely thickened, and united very firmly, except at the superior part, where there was a large collection of pus. The spermatic cord was not affected.

1460 Testicle affected with carcinoma.

The structure of the testis was completely destroyed; the disease had extended its ravages along the whole of the cellular tissue belonging to the sper-

matic cord, and the inguinal glands were affected with carcinoma. The tunics of the testicle were extremely dense in structure, and pus was found between them. This is a splendid specimen.

- 1461 Testicle carcinomatous, with destruction of the principal portions of its tunics, also of the integuments of part of the scrotum.

The history of this case is not known.

- 1462 A testicle affected with genuine carcinoma, &c. The whole of the testis had been converted into carcinomatous and medullary tumors, which had affected the absorbent glands of the spermatic cord, and the tunica vaginalis and albuginea were very much thickened; these appearances are exhibited in the preparation.

The inguinal and lumbar absorbent glands were converted into medullary and carcinomatous tumors. The testicle was extirpated; the patient died twelve weeks after the operation. The disease in the testicle had existed upwards of nine months, and his health became affected. The glands in the groin were not enlarged at the time the operation was performed.

This preparation illustrates the existence of carcinoma and fungus hæmatodes in the same subject; they are frequently combined.

- 1463 A testicle affected with carcinoma.

The natural structure completely destroyed; the tunica albuginea thickened. From a man 70 years of age.

- 1464 A testicle affected with carcinoma, the tunics are greatly thickened, and the disease had extended along the whole of the spermatic cord. The inguinal glands were converted into cancerous tumors.

- 1465 Testicle affected with carcinoma.

The tunica vaginalis and albuginea are greatly condensed, and there is an adventitious membrane between these coats, which is shown in the preparation. The inguinal glands were affected with the same disease.

- 1466 A section of a testis, which had been converted into medullary sarcoma, of great magnitude; the tunica vaginalis and albuginea are greatly thickened, and

firmly united. The same morbid change had extended along the whole course of the spermatic cord as far as the groin.

- 1467 Testis affected with medullary sarcoma ; some portions of the morbid parts are rather dense in structure. The tunica vaginalis and albuginea were greatly thickened. The enlargement was of considerable size ; the spermatic cord not diseased.

- 1468 Testicle of a child affected with medullary sarcoma. The tumor was of considerable size ; the tunica vaginalis and albuginea were greatly condensed ; and a portion of the diseased testicle had protruded through the albuginea. On cutting through the morbid part, it was found composed of medullary matter, mixed with coagulated blood. Not a particle of the natural structure of the testicle remained. The spermatic cord was perfectly healthy. A tumor formed beneath the pericranium, which affected the dura mater and pia mater ; it exactly resembled the structure of the testicle. See Section on Tumors. The abdominal viscera were all natural. The lumbar absorbent glands on the right side were converted into medullary tumors of considerable magnitude. The heart was normal. The lungs on the right side were healthy, but those on the left were affected with medullary tubercles.

The child had been perfectly healthy from its birth, and its body was well developed.

When about ten months old, an enlargement was perceived in the scrotum, which increased rapidly, and in the course of two months had acquired the magnitude and figure of a hen's egg. The tumor had not excited any pain, nor was there any sign of constitutional disease ; the case was supposed to be a hydrocele, and paracentesis was performed, but only a little blood with a brain-like substance escaped.

The case was now considered of a malignant nature, and as the glands in the groin were not affected, and the child appeared in good health, the operation of castration was proposed, which I performed ; there was considerable hæmorrhage from several of the integumental arteries, which rendered it necessary to tie them.

The ligatures came away, and the wound soon healed.

The child appeared to enjoy good health for about four months from the time of the operation ; after this period a small tumor appeared beneath the scalp, near the posterior angle of the left parietal bone. This tumor daily increased, and acquired the magnitude of an apple ; it felt pulpy, but when pressed upon pain was not excited, and there were no signs of cerebral disease. Subsequently the health of the child began to decline, the digestive organs became disordered, denoting some visceral affection ; the abdomen was tumid, and an enlargement was felt deeply seated in the abdomen. The patient lived only six months from the time the operation was performed. This case was published in the *Lancet* in 1835.

- 1469 Section of a testicle which had been converted into a tumor of immense magnitude by fungoid and medullary deposits. Not a vestige of the natural structure of the testis was visible. The tunica vaginalis was greatly thickened, as was the albuginea. The morbid growth in the testicle had caused absorption of one part of the tunica albuginea, and the disease had protruded through it. The spermatic cord had not participated in the disease, nor were the glands in the groin enlarged. The diseased testicle was removed, but the patient afterwards died.
- 1470 Testicle, structure affected with fungus hæmatodes, also the epididymis ; the tunica albuginea at this part was ulcerated. Several other organs were affected with the same disease.
- 1471 Testicle affected with fungus hæmatodes, which had produced absorption of the tunica albuginea and vaginalis, and of the integuments of the scrotum ; and formed a fungus externally.
- 1472 Section of a testicle, with the spermatic cord. The structure of the testis had been completely absorbed from the pressure of a fungoid growth, which had acquired a great size ; the tunica albuginea and the tunica vaginalis were immensely thickened, and the morbid action had affected the whole course of the spermatic cord.
- The omentum was converted into a congeries of soft

- tubercles of the fungoid character. There was a large tumor of the same kind on the spine, behind the viscera and the blood vessels. The vena cava was obliterated as far as the iliac veins. There were fungoid tubera in the liver, also in the lungs, &c. The history of this case is published in the 8th volume of the Royal Medico-Chirurgical Transactions. This is a very splendid preparation.
- 1473 Testicle affected with fungus hæmatodes. The growth is of an immense size, the tunica vaginalis and albuginea considerably thickened, and some parts firmly adherent. A large collection of pus had formed between them, and their internal surface was coated with organised lymph. All these appearances are shown in the preparation. This is a valuable specimen.
- 1474 Testicle affected with fungus hæmatodes. The whole of the natural structure of the testis was destroyed by various sized fungoid tumors; the spermatic cord was likewise affected, as were the inguinal glands. The tunica vaginalis and albuginea greatly thickened, and firmly agglutinated.
- 1475 Testicle affected with scrofula.
- 1476 Testicle, structure dense, the effect of chronic inflammation.
- 1477 Testicle affected with fungus hæmatodes.

MALE ORGANS OF GENERATION.

Comparative Anatomy.

- 1478 Organs of generation of the *Simia seniculus*, *Cercopithecus*, or howling monkey.
- 1479 Penis of a dog, the vessels of the bulb injected; the bone shown.
- 1480 Bone belonging to the penis of a dog.
- 1481 Testicles of a dog, one of them converted into carcinoma, the other was found within the abdomen, healthy in structure, but not more developed than that of a very young puppy. The description of this preparation was published in the *Lancet*, with a case of medullary sarcoma in the testis of a child, &c.

- 1482 Organs of generation of a ferret. The anal sacs and foramina leading to them from the verge of the anus are shown. A bone in the penis.
- 1483 Organs of generation of the *bradypus tridactylus*.
- 1484 Organs of generation of the *Erinaceus*, or hedge-hog. The penis, testes, and vesiculæ seminales are extremely large in this animal, especially the latter, also Cowper's glands.
- 1485 Organs of generation of the *cavia*, or guinea pig.
- 1486 Testicle of a ram, which had been converted into calcareous matter; the natural size and figure of this gland was not increased by the morbid change. The epididymis and spermatic cord were healthy. This is the most remarkable specimen I ever saw.
- 1487 A portion of the inferior part of the bladder of an ox, dried, to show the extent the ureters pass between the coats of the bladder before they terminate.
- 1488 Penis of a stallion injected with wax. There is an immense congeries of veins on the dorsum penis; they communicate with those of the crura and corpus spongiosum urethræ.
- 1489 Penis of a young ass, the structure shown.
- 1490 Organs of generation of the *didelphis gigantea*, or kangaroo.
- 1491 Penis of an opossum.
- 1492 Organs of generation of the iguana, with the kidneys, &c. This reptile has a double penis, it is of considerable size, and the urethra is grooved as in the tortoise.
- 1493 Penis and kidneys of an iguana. This reptile has no urinary bladder; the penes are very long, and large; they pass through an aperture in the integuments on each side of the verge of the anus; the urethræ are grooved, and the ureters terminate in them.
- 1494 Penis of a tortoise, cloaca, &c.
- 1495 Penis of a tortoise. It is singular that the penis of even a moderate sized tortoise should be so much more developed than that of the largest turtle I ever examined.
- 1496 Penis of a tortoise, the crura and glans penis inflated; some of the muscles shown.
- 1497 Male organs of generation of a small tortoise; the kidneys and bladder shown.

- 1498 Organs of generation of a young turtle. The penis very small, urethra grooved as in the tortoise; the bladder large, kidneys very long and flat, and greatly resembling the vesiculæ seminales of the human subject. A portion of the rectum, and the cloaca are shown.
- 1499 Organs of generation of a turtle, the rectum, cloaca, bladder, and kidneys shown, injected with size and vermillion.

FEMALE ORGANS OF GENERATION.

Normal and Morbid.

- 1500 Uterus of a fœtus, about the 6th month, with the vagina injected.
- 1501 Uterus of a fœtus, at the full period of gestation. The cervix remarkably large, and the os tinæ capacious.
- 1502 Uterus, vagina, and bladder of a child still-born. The urachus and the vessels belonging to the umbilical cord are shown, with the kidneys and renal capsules.
1503. Uterus of an infant six days old.

There were several serous cysts in the ovaria. The infant looked well developed at its birth, but the skin presented all the appearance of jaundice, and the fæces after the first day were clay-colored. Hydragryrum cum cretâ, castor oil, and various other remedies were given, without altering the color of the integuments or fæces. Erysipelas came on, nearly over the whole of the body; the child took very little nourishment, and died convulsed.

The serous and mucous coats of the intestines and the peritonæum generally presented an erythematous appearance. The liver was gorged with bile, the ductus hepaticus, cysticus, and choledochus were obstructed by a hardened dark-colored secretion, and all the ducts so much contracted as only to admit the passage of a bristle.

The gall-bladder was so small, that it scarcely appeared to exist, it was shrivelled, and completely empty. The pleuræ were very red, but the lungs and heart were healthy. The membranes of the brain presented an erysipelatous appearance; the brain was healthy, but tinged with bile.

The urinary bladder and the hypogastric arteries are shown in the preparation.

1504 Uterus of a child, 13 years of age, which possesses all the character of a foetal uterus. The child had a malformed heart.

1505 Uterus from a girl, 16 years of age; it is very large for her age. The serous covering of the uterus and Fallopian tubes were thickly coated with lymph; the substance of the uterus was very vascular, as was the internal surface of the Fallopian tubes, and a recent corpus luteum was found in one of the ovaries. The patient died in the Fever Hospital.

1506 Uterus of an old woman, who had never had a child; it is extremely small, the extremities of the Fallopian tubes were greatly dilated, and they adhered firmly to the serous covering of the intestinum rectum, which I have frequently noticed on examining the bodies of cyprians.

There were several phlebolites in the uterine veins; one of them is shown in the preparation.

1507 An uterus, the mucous surface affected with purpura hæmorrhagica.

From a woman, 24 years of age, corpulent, and very plethoric. She was attacked suddenly with febrile symptoms, which increased rapidly; she became violently delirious, and purpura appeared in almost every part of the body. After this the patient was seized with violent vomiting, the fluid discharged was of a chocolate color, mixed with dark blood, and there was a considerable discharge of blood from the intestines and the uterus, although menstruation had taken place a fortnight previous to the attack of fever.

The patient was attended by a physician, who imagined the case to be of the typhoid class, but when the eruption appeared, the complaint was considered scarlatina. She died on the 5th day from the commencement of the attack.

Inspectio. The pia mater was affected with purpura hæmorrhagica, and there was a turbid fluid between the arachnoid and pia mater; the vessels of the brain were greatly distended, the substance of the cerebrum was highly inflamed, and there was about an ounce of water in the ventricles.

The serous covering of the lungs was affected with purpura; the cellular media inflamed, and there was considerable sero-purulent infiltration. The lining of the bronchial tubes and trachea was affected with purpura.

The auricles of the heart were greatly distended with dark-colored blood, and the internal surface of the ventricles was highly inflamed; the pericardium was also affected with purpura.

The internal coat of the aorta had a petechial appearance. All the abdominal viscera were surcharged with blood, but their structure was perfectly healthy.

The vessels belonging to the uterus were greatly loaded, and there was coagulated blood in the cavity. The internal surface was affected with purpura, which is shown in the preparation. All the specimens are in alcohol.

Depletion in this case was not employed, the gentleman who attended having a great objection to bleeding in fever. The post-mortem appearances show evidently the propriety of bleeding, &c. in similar cases, particularly as all the viscera were perfectly healthy in structure, and the disease was occasioned by plethora.

Preparations 687, 804, 876, are from the same subject.

- 1508 Uterus of a woman. The serous and mucous coats are highly inflamed, as are the ovaria and Fallopian tubes. The patient, 36 years of age, of a plethoric diathesis, was attacked with scarlatina. The febrile action was very severe; three days previous to her death, she was violently delirious, and the menstrual discharge was very profuse. She died on the sixth day from the commencement of the fever. The preparation is preserved in alcohol, which shows the vascularity well.

The arachnoid membrane and pia mater were inflamed, and there was a serous fluid between them. The lateral ventricles contained about an ounce of water; the structure of the brain inflamed. If bleeding and active treatment had been employed in this case, the life of the patient might have been saved.

- 1509 Uterus, its peritoneal surface, substance, and mucous

lining highly inflamed, as were the internal linings of the Fallopian tubes ; the canal of the right Fallopian tube was distended with pus and lymph, and the extremity of the tube was obliterated. The ovarium on this side was inflamed, the left was converted into an abscess.

From a young subject ; the history of the case is not known.

1510 Uterus, the cavity extremely small, the fimbriated extremities of the Fallopian tubes obliterated, and the canals greatly distended with pus. The internal surface much thickened by chronic inflammation.

1511 Uterus and bladder, &c.

The whole of the peritoneal surface, covering the uterus, was greatly thickened by organised lymph, the effects of chronic inflammation. The uterus was extremely small, its parietes dense, the Fallopian tubes greatly shortened, their fimbriated extremities obliterated, and the canals dilated with some secretion. The ovaria were changed into various cancerous tumors, and there were several serous cysts beneath their coverings. The os uteri projected considerably into the vagina, it presented a roundish appearance, and it was more developed than natural ; the aperture was nearly closed.

The bladder was very small, its peritoneal coat was greatly thickened, and firm adhesion had taken place between it and the uterus. The mucous coat was greatly thickened by coagulated lymph, which was organised, and appeared flocculent ; the muscular coat was also much thickened.

The liver was affected with carcinoma, and there was a considerable quantity of water in the abdomen.

The peritoneal covering of the viscera of the abdomen was thickly coated with lymph, and the intestines agglutinated. From an old woman.

1512 The uterus, its serous coat greatly thickened, and beneath it there are several depositions like small tubercles. The structure of the uterus and its mucous lining highly vascular, and the cavity large ; these appearances are well exhibited in the preparation, the morbid parts having been preserved in alcohol.

The patient, 69 years of age, had been afflicted with symptoms of a diseased liver, accompanied with jaundice, for nearly twelve months. During the last five months of her life she had been teased with diarrhoea, and complained of pain in the situation of the cæcum and transverse arch of the colon. The fæces were frequently mixed with mucus and blood. These symptoms were moderated by chalk, kino, and opium. She had uterine hæmorrhage, which reduced her greatly; at last the intestines became immensely distended with air, and she expired.

The peritoneum was thickened by chronic inflammation, and the intestines were firmly agglutinated by lymph. There were depositions of lymph in the form of small tubercles, beneath the serous coverings, and on the mesentery. The liver was very small, of a deep yellow color, solid in texture, and its vascularity greatly diminished.

The mucous coat of the intestines was highly vascular, especially in the cæcum and colon, where considerable ulceration had been produced. The thoracic viscera were healthy. See Section on Diseased Intestines.

- 1513 Uterus, with a portion of the rectum; long firm adhesions had been formed between the serous covering of the Fallopian tubes, and that reflected over the anterior surface of the rectum, which are seen in the preparation; the Fallopian tubes are obliterated.

There are several small scirrhus tubercles beneath the peritoneal covering of the Fallopian tubes, and one in the uterus, near its neck. The woman was a notorious cyprian.

- 1514 Uterus of a noted cyprian.

The cavity of the uterus and os uteri were very small, long bands of adhesion had formed between the fimbriated extremities of the Fallopian tubes and the peritoneal surface of the rectum, so as to prevent their embracing the ovaria in coitus.

The patient, 25 years of age, had never been pregnant. She had suffered several attacks of syphilis, which was evidently shown by the inguinal cicatrices, and the ragged state of the labia; there were nodes

on the tibiæ. She had ceased to menstruate for nearly two years previous to her death.

There was a considerable quantity of yellow fluid in the abdomen, the liver and spleen were greatly enlarged ; the former granulated, as noticed in dram drinkers.

1515 Uterus, natural in structure, long adhesions had formed between the extremities of the Fallopian tubes, which are preserved in the preparation ; and there was a pendulous cyst near the fimbriated part of the right Fallopian tube. The ovaria rather dense in structure. The spermatic arteries were very tortuous, and obliterated. There were two large phlebolites in one of the uterine veins, between the broad ligament, which are shown. From a cyprian.

1516 Uterus ; the Fallopian tubes were greatly dilated, and their extremities adhered very firmly to the peritoneal covering of the anterior surface of the rectum ; the ovaria were filled with serous cysts.

The patient, a young woman, had long indulged in every species of excess ; symptoms of diseased liver came on, followed by ascites and hydrothorax, which caused death.

Both sides of the chest were nearly filled with water ; the pericardium contained four ounces of fluid. The heart was large ; and the right auricle gorged with very black blood. The cavity of the left ventricle very capacious ; the aortic valves thickened and shortened. The liver was granulated, and there was a considerable quantity of water in the abdomen.

I have before noticed that I have often seen the extremities of the Fallopian tubes obliterated, and adhering to some portions of the peritoneum belonging to the pelvic viscera of cyprians. These morbid changes are probably produced by their mode of life, and may account for so few of them being impregnated.

The head of this woman is preserved in my collection.

1517 A section of an uterus. There is a small polypus in the internal surface of the uterus, close to the aperture of the Fallopian tube on the left side. There

is also a large dense cyst in the duplicature of the peritoneum forming the broad ligament, which contained a transparent fluid. The extremity of the Fallopian tube obliterated, the ovarium extremely small, and its structure solid.

The patient, 40 years of age, who had never been pregnant, although she had been married twenty years. She died of purpura hæmorrhagica. The particulars of this case will be related in the description of purpura.

- 1518 Uterus, with a small polypus at its cervix.
From a patient, 50 years of age, who died of fungus hæmatodes in various viscera.
- 1519 Uterus, with two small polypi, situated about half an inch from the os uteri: there are also two small tumors beneath the mucous surface, and an osseous tumor beneath the serous covering of the posterior part of the uterus. The ovaria presented externally a tubercular appearance, and their substance was very dense.
- 1520 An uterus, very diminutive, the ovaria small and granulated, structure solid, no signs of vesicles or ova, and there is a small polypus near the neck of the uterus. From an old maid, who died of pericarditis and emphysema.
- 1521 An uterus with a polypus, corpus luteum shown.
- 1522 A polypus which was extirpated from the cervix uteri.
- 1523 Section of an uterus, with the Fallopian tube.
The cavity and cervix of the uterus were nearly obliterated. There is a small fibrous tumor at the angle of the uterus, near the opening of the Fallopian tube, also a small polypus.
The patient, 60 years of age. The lungs were studded with scrofulous tubercles, and there were several excavations. The mesenteric glands were converted into caseous matter.
- 1524 Uterus, its natural structure nearly destroyed by the growth of fibrous tumors of different sizes, some of them converted into osseous matter. The ovaria were filled with glairy mucus in sacculi.
- 1525 Uterus, the Fallopian tubes cut off. There were two fibrous tumors in the cavity of the uterus, near its fundus, which had attenuated its parietes.
- 1526 Uterus, with a part of the inferior portion of the blad-

der. Various sized fibrous tumors had formed beneath the serous covering, and in its substance. A large one, about the figure of a small apple, had grown beneath the anterior surface of the uterus, which had pressed on the bladder, and had frequently prevented, for a time, the flow of urine into it, occasioning great distress to the patient, and leading to the impression that she labored under suppression of urine, as a catheter had been employed, and the bladder was found quite empty. The patient was about 49 years of age, had ceased to menstruate for three years, and suffered from uterine disease nearly four years. She had also symptoms of phthisis pulmonalis.

- 1527 An uterus, with various sized fibrous tubercles beneath the peritoneal covering, in its substance and cavity. Some of the tumors are very large, particularly one situated at the posterior and inferior surface, which is cut through to show its dense fibrous structure, and it appeared to have been formed by the union of several small tumors. The fundus of the uterus had been absorbed; the neck healthy.

The ovaria and Fallopian tubes normal.

The patient was nearly 50 years of age; had suffered from the effects of uterine irritation for several years, and had at times experienced great difficulty in voiding fæces.

Constipation came on, which could not be relieved, and the patient died with symptoms of enteritis.

The mucous coat of the intestines was highly inflamed, in some parts sphacelated. The colon and rectum were distended with hardened fæces; this accumulation of fæculent matter, and its retention in the intestines was caused by the large tumor having become impacted in the pelvis, and compressed the rectum.

- 1528 A very large fibrous tumor, which had its origin in the cavity of the uterus, and had protruded into the vagina, and ultimately externally.

The patient was 40 years of age, and had been for several years subject to profuse discharge from the vagina, which was supposed to be leucorrhœa, and she experienced at the same time a bearing-down sensation, which another practitioner imagined to be

the effects of a prolapsus uteri. She had not ceased to menstruate, the discharge from the vagina increased, and it was frequently mixed with blood. She complained of violent pain within the vagina, experienced great difficulty in voiding urine, and the external parts of generation were greatly inflamed and swollen. Pains like labor came on, the tumor protruded externally, and on examination it was ascertained that it had a neck or peduncle, like a polypus, at the neck of the uterus. It appeared that the only chance of saving the life of the patient was by separating the tumor from the connecting parts, and the question was, Whether the peduncle should be removed by ligature or the knife? Finding the neck of the tumor so very dense in structure, it was considered right to divide it with a scalpel.

There was considerable hæmorrhage after the operation, and for several days, which was suppressed by vinegar and water, and the patient recovered. The tumor was more vascular than any of the kind I ever examined. The blood-vessels are shown in the preparation.

1529 A section of an uterus.

There is a large serous cyst in the broad ligament, the serous surface is greatly thickened by chronic inflammation; there is a small dense tumor on its external surface, and a pendulous serous one near the extremity of the Fallopian tube; this tube is obliterated.

1530 Uterus of a very old woman, with a number of various sized pendulous osseous tumors beneath the serous membrane. The parietes of the uterus immensely thick. The tumors probably had been originally of the fibrous kind, as described by Baillie, and had been converted into bone. I have several specimens of the kind to illustrate this morbid change.

1531 Section of an uterus, with a large serous cyst in the broad ligament; the Fallopian tube pervious; the ovula Graafiana shown.

1532 A section of an uterus. There is a large serous cyst in the broad ligament, containing a transparent fluid, and the Fallopian tube is obliterated. These cysts have been described as hydatids.

- 1533 Extremity of the Fallopian tube, with two small serous cysts.
- 1534 Uterus natural in structure; there were pendulous serous cysts near the fimbriated extremity of the Fallopian tubes.
- 1535 Ovarium, and extremity of the Fallopian tube.
From a woman who had never borne a child. Vesicles and signs of corpora lutea are seen; the latter probably produced by excitement. Similar appearances I have seen in the ovaria of virgins.
- 1536 Encysted ovary.
- 1537 Uterus, vagina, and a portion of the bladder.
The uterus and its cavity very small; the vagina in some parts ulcerated. There were serous cysts, and small dense tubercles in the left ovary, and the right ovary was changed into a large abscess.
- 1538 A section of an uterus, with pendulous serous cysts near the extremity of the Fallopian tube; there was also a large cyst in the ovary; the os uteri obliterated.
The patient was 50 years of age; there was a gallon of fluid in the abdomen; the liver granulated; the peritoneum thickened by lymph and small tubercles, and all the intestines were agglutinated. The integuments were affected with purpura hæmorrhagica.
- 1539 Uterus, the right ovary was immensely enlarged, its serous surface greatly thickened, and in some parts semi-cartilaginous; firm adhesion had taken place between the ovary and the posterior surface of the peritoneal covering of the uterus.
On cutting open the diseased ovary, it was found filled with a dense gelatinous secretion, mixed with coagulated lymph; the surfaces were thickly coated with organised lymph, and there were several solid substances like tumors, which seemed to be composed of the same substance.
The Fallopian tubes, at their extremities, adhered firmly to the surface of the diseased ovary. The uterus did not appear to be diseased. The history of this case is not known.
- 1540 Uterus, with a diseased ovary, &c.
The uterus was very small; the whole of the cervix

obliterated ; in the cavity there was a small polypus. The right ovary was formed into a large sac, which was filled with sebaceous matter, matted with long coils of delicate brown-colored hairs. None of these hairs seemed to be growing from the internal surface of the cyst. The external surface of the ovary was remarkably dense. The left ovary was formed into sacculi, filled with glairy fluid, but it was not much enlarged. From an old woman. The history of the case is not known.

- 1541 An uterus ; the natural structure of the left ovary destroyed by a semi-gelatinous secretion, which had distended the capsule enormously, and firm adhesions had been effected between a portion of the external surface of the ovary and the serous covering of the transverse arch of the colon, and the fundus of the bladder. On cutting through the diseased ovary, the sac was found to be half an inch in thickness, the internal surface highly inflamed, and some portion in a sphacelated state. There was a considerable quantity of coagulated lymph and fœtid pus in the sac. An ulcerated opening of communication had been established between the superior part of the surface of the ovary and the cavity of the transverse arch of the colon, and the fundus of the bladder, which had allowed the escape of the contents of the ovary into these parts. The mucous coat of the colon and bladder was highly inflamed.

The patient 44 years of age. The abdomen was greatly expanded by the ovarian enlargement, which had been increasing for nearly three years without affecting her health materially, and she menstruated regularly. About six months previous to her death, the enlargement of the abdomen began to occasion great pain in the loins, the secretion of urine diminished, and it was with difficulty voided. The symptoms gradually increased, pain was complained of over the whole surface of the abdomen, and she occasionally had attacks of vomiting. To give temporary relief to her sufferings, tapping had been frequently proposed, to which she would not assent. At last, symptoms of peritonitis came on, and she was hourly expected to die ; but to the astonish-

ment of the patient, and the persons about her, she was suddenly seized with an immense discharge from the bowels and the bladder, which flowed involuntarily, and deluged the bed and room, and in the course of a few hours her abdomen was as flaccid as if she had been tapped. The unexpected suddenness of this immense discharge of fluid seemed at the first impression unaccountable, but a little consideration satisfied the mind that this event could only have taken place by the giving way, by ulceration, of the ovarian cyst, and some portion of intestine and the bladder. Although the patient rallied for a time in a surprising manner, from the debilitating effects of this shock to the constitution, yet there appeared to be symptoms denoting organic disease, from which there was no hope of recovery. Pain in the abdomen was complained of, symptoms of hectic fever came on, succeeded by diarrhœa, which continued for ten days.

1542 Part of an ovarian cyst, which had increased to an enormous magnitude; its external surface had formed adhesions with the serous surface of the diaphragm, and most of the coverings of the abdominal viscera. The fluid was contained in various sized cysts, it was gelatinous; the internal surfaces of the cysts were thickly coated with coagulated lymph, which adhered firmly. Paracentesis had been performed several times. The patient died from the effects of peritonitis. This would have been a very unfavorable case for the removal of the ovarium by an operation.

I have performed the operation of paracentesis repeatedly in ovarian dropsy, but only in one case was an absolute cure effected.

A patient, in very good health, had an ovarian dropsy; the abdomen was greatly enlarged, and she experienced great difficulty in breathing, which induced her to wish an operation to be performed, to give her temporary relief. A very large quantity of semi-gelatinous fluid was evacuated, which gave the patient great comfort. In about three months the disease recurred, but the abdomen was not so much distended as in the first instance. I repeated the operation, and ordered a belt with

buckles and regulated straps to be applied, which was worn for a considerable time, and to my astonishment there was no occasion to operate again, and the patient is now (7 years from the time of the last operation) in perfect health.

- 1543 Uterus, vagina, and a portion of the rectum. The uterus was not diseased; the right ovarium contained a large collection of pus, and the Fallopian tube was obliterated. The serous covering of the ovarium adhered to the anterior portion of the peritoneum covering the rectum, and an opening of communication had been established between it and the rectum, which is shown in the preparation by a black bristle. The mucous coat of the vagina was completely destroyed by ulceration, but this had not been occasioned by venereal disease, the woman being beyond suspicion.

The mucous coat of the rectum was greatly inflamed, thickened, and in some parts ulcerated, and a large abscess had formed in the cellular tissue connecting the vagina and the rectum, which is shown, the intestine having been cut open.

The peritoneum and all its reflections were thickly coated with lymph, particularly where it covers partly the pelvic viscera. The mucous coat of the ileum and cæcum were highly inflamed. From a woman, 30 years of age, who had suffered considerably from repeated attacks of menorrhagia, accompanied with profuse leucorrhœa for nearly three years. The menses ceased, and about three months previous to her death she complained of great pain in the abdomen, accompanied with diarrhœa, which could not be checked.

The diarrhœa increased, and pus mixed with blood was frequently voided with the fæces; there was a profuse discharge of pus from the vagina. Her health gradually declined; a fever of the typhoid character came on, which caused death.

- 1544 An uterus, the peritoneal surface greatly thickened by organised lymph and small miliary tubercles. The liver contained scrofulous tubercles, the mesenteric glands were converted into caseous substance, and the arachnoid membrane and the pia mater were covered with very small tubercles.

- 1545 Uterus, with the vagina, &c.
There were scirrhus tumors in the uterus; the mucous surface of the vagina was greatly thickened, and partly ulcerated; the ovaria very dense, and small.
- 1546 Uterus; it was about the size of one between the second and third month of pregnancy. On cutting through its parietes, the cavity was found filled with a putrid kind of pus, and the mucous surface was in a sloughy state; the os uteri was very dense. There were several large fibrous tumors beneath the peritoneal surface of the uterus at its posterior surface, the largest did not exceed the size of a walnut. The fimbriated extremities of the Fallopian tubes adhered to the peritoneum, and the canals were obliterated by small carcinomatous tumors. The peritoneum and its reflections were considerably thickened by coagulated lymph, the effect of chronic inflammation. There were several cancerous tumors in the lungs; the liver was firm in structure, but did not contain any malignant tumors. The patient, 69 years of age, died of carcinoma in the mamma. There were a great number of small cancerous tumors beneath the integuments covering the chest.
- She had suffered for nearly three years from this disease, and six months previous to her death she complained of pain in the uterus; there was a very profuse discharge of offensive matter.
- 1547 Uterus, with the urinary bladder.
The uterus was very large, the parietes very thick, the mucous surface was completely destroyed by cancerous ulceration; the Fallopian tubes were considerably shortened and thickened, their canals obliterated, and the ovaria were converted into carcinomatous tumors. The peritoneum and its reflections over the abdominal and pelvic viscera were thickly coated with organised lymph, which appeared of a brownish color; and the anterior surface of the uterus adhered firmly to the posterior part of the fundus of the bladder. The mucous coat of the bladder was in a sphacelated state. The neck of the uterus presented a rounded appearance, and projected more than natural into the vagina; the os uteri was very small.

- 1548 Uterus, vagina, and rectum, affected with genuine carcinoma.

The uterus was extremely large, the peritoneal surface very dense in consequence of chronic inflammation, and there were several scirrhus tumors of a small size beneath it, at its anterior surface. The parietes of the uterus, about an inch thick, presented all the signs of carcinoma. The cavity was very small, and there was a cancerous tumor, about the size of a pea, beneath its surface, an inch from the commencement of the cervix uteri. The whole of the cervix and a portion of the vagina were destroyed by cancerous ulceration, and an opening of communication had been established between the vagina and a portion of the rectum. The ovaria were affected with the same disease.

From a patient 65 years of age.

- 1549 Uterus, vagina, and bladder affected with carcinoma, the kidney diseased.

The uterus appeared nearly as large as at the third month of pregnancy; the parietes not very thick, but dense in structure: the cavity near the fundus very capacious; the mucous surface destroyed by cancerous ulceration, as was the vagina; and the disease had extended into the anterior part of the bladder, between the ureters and the cervix. The right ureter, near its termination in the bladder, was obliterated, which had caused this tube to be greatly dilated, as were the pelvis and infundibula; the structure of the kidney was destroyed, and the capsule alone remained, which was greatly thickened. The other kidney healthy.

The peritoneum was thickened by chronic inflammation; there were several medullary tubera in the liver; all the other viscera healthy.

From a woman 59 years of age, who had suffered distressing agony for nearly two years.

This is a very remarkable case of medullary sarcoma, the shaggy appearance of the remains of the cervix uteri and the vagina are seen, presenting an appearance like an unravelled spleen.

- 1550 Uterus, vagina, and rectum.

Nearly the whole of the natural structure of the uterus and vagina are destroyed by cancerous ulceration.

tion; the disease had extended into the inferior part of the bladder, and the ovaria were converted into large scirrhus tumors. This presents the greatest extent of morbid action I ever examined. The patient 68 years of age.

- 1551 Uterus, vagina, and rectum, affected with carcinoma. In the preparation the clitoris is also shown. The disease had commenced in the cervix uteri, which it had completely destroyed, and an extensive opening of communication had been established between the vagina, rectum, and bladder. The bladder adhered firmly to the cellular tissue of the pubis, its fundus extending four inches above the bone; its parietes were greatly thickened, and the mucous coat sphacelated. The ovaria were very small, structure dense. From a very old woman. The history of the case is not known.
- 1552 Uterus, affected with carcinoma, parietes extremely thick, os uteri nearly obliterated, the mucous surface ulcerated; there was a scirrhus tumor beneath the serous surface at the posterior part of the uterus; the ovaria were carcinomatous, and there were several serous cysts near the extremities of the Fallopian tubes; the latter were greatly thickened and obliterated. From an old woman.
This preparation shows the character of carcinoma admirably.
- 1553 Uterus, the ovarium affected with carcinoma. The disease had extended into the sigmoid flexure of the colon. The iliac and inguinal glands were also in a cancerous state. From an old woman who died of phlegmasia dolens. The diseased glands are shown in the preparation. The mucous glands in the rectum were also diseased.
See Section on Diseased Intestines.
- 1554 Uterus, its structure nearly destroyed by cancerous ulceration; there were several osseous tumors of a small size in the remaining portion of the uterus; one ovarium was carcinomatous; the other was greatly dilated by an accumulation of gelatinous secretion, and its internal surface was greatly thickened by coagulated lymph and small osseous deposits.
- 1555 Uterus and ovaria affected with carcinoma. The disease had extended into the bladder. There

were several serous cysts near the extremities of the Fallopian tubes, and many of the absorbent glands in the pelvis were converted into large scirrhus tumors. The liver was affected with the same disease, and there was a large collection of fluid in the abdomen.

From an old woman who had been several years afflicted with uterine disease.

1556 Uterus, vagina, bladder, &c.

The body of the uterus is enlarged, and its parietes thickened; the mucous surface destroyed by cancerous ulceration, also the cervix and the vagina. The ovaria were scirrhus, and the morbid action had extended into the bladder.

A portion of intestinum ileum adhered firmly to the serous surface of the uterus, as is shown in the preparation. From a patient 60 years of age.

1557 An uterus, and part of the bladder.

The parietes of the uterus were very thick and firm in texture; the cervix was partly destroyed by cancerous ulceration, as was the vagina; the ovaria scirrhus.

A portion of the bladder and the rectum also affected. The patient was 65 years of age, the right mamma was carcinomatous.

1558 Uterus, with carcinomatous tubercles in its substance, also beneath its peritoneal covering, the internal surface was highly inflamed and ulcerated. The right ovary was studded with scirrhus tumors of different sizes, there were likewise serous cysts; the left ovary was extremely small, and very dense in structure. One of the breasts was affected with cancer. The extremity of the Fallopian tube is obliterated.

This is a valuable preparation.

1559 Uterus, with a portion of the rectum.

The whole of the peritoneum and its reflections were thickly coated with lymph which adhered very firmly, and in many parts near the pelvic viscera sphacelation had taken place, and a portion of the posterior part of the uterus was ulcerated; this is seen in the preparation. The parietes of the uterus were very thin and dense in structure; the os uteri was nearly closed, the ovaria carcinomatous. The liver contained scirrhus tumors.

From an old woman.

1560 Uterus, vagina, and rectum.

Ulceration had taken place in the internal surface of the uterus, and a considerable portion of the muscular structure had been destroyed; the vagina was ulcerated, and a communication had been established between it and the rectum. There were also fistulæ in ano, the consequence of hæmorrhoids. The lungs were nearly filled with scrofulous tubercles; the liver was of a pale color and very soft; the mesenteric glands were converted into caseous matter, and there were a number of scrofulous tubercles beneath the mucous coat of the small intestines; the mucous glands greatly enlarged.

The patient 46 years of age, had been afflicted with uterine disease and piles. The discharge of pus from the vagina and rectum had been very profuse; fever of typhoid character came on, which occasioned death.

1561 Uterus greatly enlarged, parietes thick, there was a small cancerous tumor about an inch from the superior part of the uterus, beneath the mucous surface; the latter was in a sphacelated state, occasioned by carcinomatous ulceration; the vagina was affected with the same disease. The ovaria were converted into fungoid tumors. The liver was affected with medullary tubera.

1562 Uterus, the cervix affected with medullary sarcoma, the ovaria carcinomatous.

There were several medullary tubera in the liver, and in the mesentery; the rest of the abdominal viscera were healthy, likewise the thoracic.

The uterus was a little enlarged, its structure more dense than natural, and there were several small scirrhus tubercles beneath the mucous surface; the cervix presented all the genuine characters of medullary sarcoma, which is seen in the preparation; the ovaries were carcinomatous.

The patient 40 years of age, had suffered severely from uterine pains for nearly two years, and the pain was greatly increased during the menstrual periods.

There was a considerable discharge of pus, frequently mixed with blood, from the uterus.

Her health and strength gradually declined, and about a year previous to her death, she ceased to menstruate, and her countenance became sallow.

- 1563 Uterus affected with medullary sarcoma.
The disease had commenced in the cellular tissue, and had progressively extended into the cavity of the uterus ; it had produced an enlargement of the organ to nearly the size of a gravid one at the third month.
- 1564 Uterus and intestinum rectum, affected with medullary sarcoma.

The peritoneum was greatly inflamed, and lymph deposited abundantly ; the intestines were agglutinated. The surface of the liver was thickly coated with organised lymph, the effects of chronic inflammation, its structure very firm, and the cellular media were greatly thickened. The gall-bladder contained only a small quantity of bile. The spleen small, structure dense, and its capsule cartilaginous.

The mucous glands of the ileum and cæcum, and transverse arch of the colon, were greatly enlarged, and the internal surface inflamed and ulcerated.

The thoracic viscera healthy.

The body of the uterus was enlarged, parietes thick, and very firm in texture ; its cavity large, the surface inflamed. The cervix and os uteri were completely destroyed ; the internal surface of the Fallopian tubes was highly vascular, and their fimbriated extremities obliterated.

The ovaria were very small, and very firm in texture. The disease at the cervix uteri had extended into the rectum, and had destroyed the whole of the mucous surface ; the ragged state of the muscular coat is shown in the preparation. The internal surface of the vagina was also destroyed ; the bladder was not diseased.

The patient, 40 years of age, had been affected with pain in the uterus for nearly three years, which had increased during the last six months of her life, so as to make her existence miserable. The menstrual periods were more frequent than natural, very profuse, and accompanied with agonising pain. She was also subject to uterine hæmorrhage between the times of menstruation, and a discharge from the vagina, which appeared like cream, sometimes tinged with blood. She likewise had great difficulty in voiding urine.

Her health became seriously affected, the countenance

became sallow, and she had frequent attacks of diarrhœa.

This is a splendid preparation.

1565 An ovarium, with the extremity of the Fallopian tube. The ovary was formed into a large scirrhus tumor, and long adhesions had formed between its peritoneal surface, and the fimbriated extremity of the Fallopian tube. Some of the uterine arteries were obliterated. The rectum was affected with cancer.

1566 A scirrhus ovarium.

1567 Uterus, natural in structure, the ovaria carcinomatous, the serous covering thickened by chronic inflammation, and in some parts semicartilaginous. The whole of the peritoneum presented similar morbid changes, and the liver was affected with carcinoma.

1568 Uterus. The mucous surface highly inflamed, the right ovarium shows all the characters of carcinoma, the other the fungoid character. The patient had carcinoma of the mamma, which caused her death.

1569 Uterus, injected with size and vermillion.

The uterus was healthy, the ovaria converted into fungus hæmatodes. There was a considerable quantity of water in the abdomen, the liver extremely large, of a camboge color, structure very soft, and several of the blood-vessels and biliary ducts were obliterated. The gall-bladder was greatly contracted, and only contained a small quantity of albuminous fluid, probably secreted by the vessels belonging to its internal surface. The biliary ducts were also obliterated. There was a considerable quantity of fluid in both sides of the chest, and there were several fungoid tubera in the lungs; the heart healthy.

The patient, 30 years of age, had lived immoderately for several years. She was afflicted with jaundice for many months previous to her death, and had frequent hæmorrhage from the nose and lungs.

The morbid condition of the liver and obliteration of biliary ducts satisfactorily account for the occurrence of jaundice.

1570 Uterus, its structure natural, the ovaria converted into large fungoid tumors, as was the kidney. There was an immense fungoid tumor surrounding the knee-joint.

This is a splendid specimen. See the Section on Diseased Joints and Kidnies.

1571 Uterus and ovaria diseased.

The peritoneal surface of the uterus was thickly coated with organised lymph; the internal surface was ulcerated, and presented the appearance of melanosis. There was a small osseous tumor in the cavity, and a small polypus.

The right ovary had been completely destroyed by the growth of a medullary tumor, which had acquired a considerable size. Firm adhesions had taken place between the serous surface covering the ovary, and that portion reflected over the anterior part of the rectum, and by ulceration an opening of communication had been effected between them. The left ovary was also affected with the same disease. The whole of the peritoneum and its reflections were thickly covered with lymph, and all the intestines and pelvic viscera were agglutinated.

On examining the rectum, an ulcerated opening was seen, which communicated with the right ovary; unfortunately the person who inspected the body separated the rectum from the morbid parts. There was a large collection of water mixed with flakes of lymph in the abdomen, and there was fluid in both sides of the chest. The patient, 36 years of age, had been married several years, but had never been pregnant. The menstrual periods had never been regular from their commencement, and were always accompanied with distressing pain.

About two years previous to the death of this patient her health began to decline; she complained of great pain in the region of the uterus, and was annoyed with leucorrhœa.

Various modes of treatment were employed to check the progress of the disease, but without the desired effect. The pain in the pelvis continued, she complained of a dull pain in the region of the right kidney, and had some difficulty in voiding urine. Symptoms of fever came on, accompanied with frequent rigors, which continued nearly a week.

She was suddenly attacked with symptoms of diarrhœa, and a considerable quantity of pus was mixed with the fæces, which smelt offensively. The bowel

complaint was moderated by an astringent mixture, but pus continued to be discharged with the fæces, the febrile symptoms ceased, and the patient did not experience any pain.

At this period some hope of her recovery was entertained, but her health did not improve, her countenance became sallow, and pus, tinged with blood, occasionally passed with the fæces. It was now evident that the disease was of a malignant character. A few months previous to her dissolution ascites with œdema of the lower extremities came on, and very little urine was secreted, fever commenced, and the brain became affected.

This is a very singular case.

1572 An uterus at the full period of gestation.

The arteries and veins were injected with size and vermillion, also with wax injection to show the numerous arteries, and particularly the veins, which Dr. WILLIAM HUNTER denominated large sinuses. The uterus was cut open to show the thickness of its parietes, the vascularity of its internal surface, and the vessels where the placenta was attached. A portion of the cervix uteri was lacerated. This is a very valuable preparation, particularly for a lecturer on Midwifery.

The patient was 21 years of age, the labor was (I was informed) very lingering, and there was considerable hæmorrhage during the pains. The hæmorrhage was very profuse after the expulsion of the placenta, and the patient died in a quarter of an hour. This would have been a fair opportunity to have tried the effects of transfusion of blood. There were nearly three pints of blood in the cavity of the uterus, all the other viscera were very healthy.

1573 Uterus of a woman 24 years of age, who died after parturition. The arteries were injected with size and vermillion. I was informed by the Accoucheur who attended her, that the labor was very lingering, and symptoms of fever came on the day after delivery. These were followed by delirium, which caused death on the sixth day from the commencement of the attack. The perinæum was lacerated in labor, but the laceration had not completely extended through the sphincter ani. The vagina was

greatly inflamed, as was the mucous lining of the vagina, and the fundus of the uterus, where the placenta had been attached, was nearly in a sphacelated state. Most of the uterine veins were filled with pus, and their internal surface highly inflamed, as was the internal lining of the Fallopian tubes. An abscess had formed in the right ovary, and from the extreme thinness of its serous surface, I think it would (had the patient lived a few days longer), have burst into the abdomen. The brain was not examined, if this had been done, I have no doubt that the arachnoid membrane, pia mater, and the substance of the brain would have been found highly inflamed, appearances I have seen in similar cases.

- 1574 Uterus of a woman, who died a few days after delivery. Inflammation of the uterus came on, accompanied with fever and delirium, which caused death. The internal surface of the uterus and all the veins highly inflamed, and a portion of the placenta near the fundus was found adhering, which probably gave origin to all the symptoms.

- 1575 Uterus, and a portion of the urinary bladder, injected with size and vermillion; from a woman who died on the 12th day after parturition.

The patient, 26 years of age, was delivered by the forceps of her first child. The labor was extremely lingering, and the extraction of the child (which was dead) was rendered difficult in consequence of a lessening of the pelvis, by the approximation of the ossa pubis too closely to the base of the sacrum.

The placenta was expelled about half an hour after the removal of the child. Every thing went on favorably until the fourth day, when the patient began to complain of pain in the lower part of the abdomen, and a burning sensation in the vagina. The pulse became full and hard, 99 in a minute. Twenty ounces of blood were taken from the arm, which was highly inflamed, purgatives and saline medicines were prescribed, and fomentations employed. The symptoms increased, although repeated bleeding, generally and locally, was had recourse to.

The lochial discharge ceased, and the milk left the breasts; fever came on, and the patient complained of violent pain in the head, and vomited frequently.

The abdomen was not distended, nor was pain complained of when pressure was made. The uterine affection began to moderate, and some hope was now entertained that she might recover, but unfortunately the pain in the head, with intolerance of light, increased, and there was considerable pyrexia. Bleeding, blistering, and mercury were employed in vain. The patient died on the 12th day from the time of her delivery.

The arachnoid and pia mater were highly inflamed, and pus was found between them; the substance of the brain was extremely soft and vascular. There were two ounces of turbid fluid in the lateral ventricles, and about half an ounce of the same kind of fluid in the fourth ventricle. There was not the least sign of peritonitis, nor were there any morbid appearances in the abdominal or thoracic viscera.

The parietes of the uterus were extremely firm in texture, and highly inflamed, but the greatest degree of inflammation existed in the internal surface, where ulceration had taken place, and near the cervix the surface was sphacelated; this is seen in the preparation.

The ovaria and Fallopian tubes were inflamed; the corpus luteum was in the left ovary; the internal coat of the bladder was also inflamed. This is a very interesting case in a pathological point of view, as it proves that the peritoneum is not always affected in inflammation of the uterus after delivery, but it is found generally inflamed in puerperal fever.

I never saw a case of inflammation of uterus terminate favorably.

- 1576 Uterus of a woman, who died about a fortnight after parturition. Symptoms of inflammation of the uterus came on about a week after delivery. The uterus and vagina were inverted, to show the morbid appearances. The whole of the internal surface was highly inflamed, lymph had been deposited, but the fundus of the uterus, where the placenta had been attached, was more affected than the rest; the mucous surface of the vagina was inflamed, and partly ulcerated.

The corpus luteum is shown.

The placenta adhered so firmly, that the uterus

seemed to have no power to expel it, and it was deemed necessary to extract it with the hand. This operation, I was informed, was effected with great difficulty, the adhesion being so firm.

1577 An uterus, showing ulceration of the internal surface, a morbid state of the right ovary, and sloughing of the lining of the Fallopian tube.

The peritoneal surface is thickened by organised lymph. The corpus luteum is seen in the left ovary.

The patient, 34 years of age, of a delicate constitution, was recently delivered, the labor was natural, there was profuse hæmorrhage after the birth, and although the uterus made several efforts to expel the placenta, and pressure was used on the abdomen to assist its action, yet the placenta was retained. The hæmorrhage became so profuse as to endanger life, it was therefore thought prudent to introduce the hand into the uterus, and carefully separate the placenta.

The placenta was found to be attached to the posterior part of the uterus near the cervix, a considerable portion having been detached; the other remained firmly adherent, so as to require some time for separation. The hæmorrhage was increased by the removal of the placenta, but was soon subdued by pressure on the abdomen, and the frequent application of cloths with vinegar and water.

Great exhaustion was occasioned by the hæmorrhage; the pulse was small and frequent, but regular; in the course of twenty-four hours her powers rallied, and every thing seemed going on favorably till the fifth day, when pain was complained of a little above the pubes, which was increased when pressure with the hand was made. The pulse became full and hard, and she was extremely restless and anxious. Inflammation of the uterus was suspected to be the most likely cause of the symptoms. Twenty ounces of blood were taken away from the arm, the blood was buffed and cupped, and sixteen ounces were removed away the following day, presenting the same inflamed appearances. Leeches were applied to the abdomen, and fomentations employed frequently. The symptoms for a time subsided, and it was imagined that there was some hope of recovery,

but rigors came on, accompanied with febrile symptoms ; the abdomen became greatly distended with air, and she expired.

The peritoneum was inflamed, and most of the intestines were agglutinated by coagulated lymph. There was about a pint of fluid in the cavity of the abdomen ; the intestines were distended with air. The uterus was as much contracted, as it usually is at the third week after delivery.

The posterior part of the uterus, where the placenta was attached, was in a sloughy state. The left Fallopian tube and ovary were organically diseased. The abdominal and thoracic viscera were healthy. As no cerebral affection had been manifested, it was deemed unnecessary to inspect the brain.

1578 Uterus, the internal surface was ulcerated, the peritoneal coat greatly thickened by lymph, the right ovary converted into an abscess, the effect of inflammation after parturition. The stomach and intestines were greatly distended with air ; there was a great quantity of fluid in the abdomen, mixed with flakes of lymph. The peritoneum was highly inflamed, and the pelvic portions considerably thickened by coagulated lymph. Most of the convolutions of the intestines were agglutinated. The uterus had contracted nearly to its natural size, its cavity contained pus ; its surface was inflamed and ulcerated.

The Fallopian tubes were inflamed, and filled with pus, and a large abscess had formed in the right ovary. The mucous coat of the bladder was also inflamed. The thoracic and abdominal viscera were healthy.

The patient was 40 years of age ; she appeared to be doing well till about the 10th day after parturition, when she began to complain of pain in the lower part of the abdomen, which was accompanied with sickness and rigors. The pulse was scarcely ever less than 130 in a minute, and she had febrile paroxysms, which came on at various periods daily. The patient was attended by a distinguished accoucheur, who did all in his power to save her, but in vain ; the abdomen became distended, she sank

and died on the 22d day from the time of her confinement.

- 1579 An uterus, the internal surface and vagina in a sloughy state; the corpus luteum shown. The patient had a deformed pelvis, she was attended by a midwife, and had been in labor for three days. The motions of the child had not been felt for two days; the discharge from the vagina was extremely offensive, which denoted that the child was dead. On examination it was found that the deformity of the pelvis existed between the pubis and the sacrum, and there was a curvature of the spine. The labor pains having ceased for several hours, the os uteri being fully dilated, and there being every reason to believe the child to be dead, embryotomy was performed, the narrowness of the pelvis being so great as not to allow of the use of the forceps. The child and the placenta were very putrid.

The day after delivery, pain was complained of in the abdomen, which felt nearly as large as before the birth of the child, there was a very offensive discharge from the uterus, and it was necessary to draw off the urine. The abdomen became greatly distended, and all the symptoms of peritonitis, accompanied with fever, supervened.

Every endeavour was made to save the patient, but without success; the fever increased, the brain became affected, and she died on the 7th day from the time of the delivery. There was a considerable quantity of pus, mixed with coagulated lymph, in the abdomen. The uterus had not contracted considerably. The superior part of the pelvis measured only two inches and a half from the pubis to the sacrum; the long axis or diagonal four inches.

The peritoneum was highly inflamed, more particularly where it covers the pelvic viscera. The whole of the internal surface of the uterus and vagina were sphacelated. The liver was granulated; the heart and lungs healthy. The spine had three lateral curvatures, one in the cervical, another in the dorsal, the last in the lumbar.

- 1580 Uterus, the mucous surface inflamed, the whole of the vagina sphacelated.

The patient died of peritonitis, accompanied with

fever of a typhoid character, on the 7th day after parturition.

The labor was very lingering, the child was remarkably large, and it had been allowed to remain impacted in the pelvis too long. If the forceps had been employed in good time, the life of the child might have been saved, and the injury to the vagina prevented.

1581 An uterus, the internal surface sphacelated, the corpus luteum shown.

The patient, a very delicate person, 21 years of age, and very diminutive in stature, was delivered of a child; there was considerable hæmorrhage during and after labor, which became very alarming, accompanied with syncope; by stimuli and other remedies, and the application of a bandage round the abdomen, the hæmorrhagic action lessened. The patient was greatly weakened by the loss of blood; she was very nervous, and had for many years been troubled with palpitation of the heart.

A nutritious regimen was ordered, and tonic medicines, such as sulphate of quinine, with acids, &c. but her strength did not improve. There was considerable discharge from the uterus, tinged with blood, and pain was felt in the situation of the uterus; the discharge ultimately became very fœtid; she gradually sank, and expired on the 14th day after her confinement.

There were two quarts of water in the abdomen, but not the slightest blush of inflammation in the peritoneum. The abdominal viscera were natural, but remarkably soft in structure, and appeared bloodless. There were about six ounces of water in the left side of the thorax, and four in the right; the lungs were healthy.

There was an ounce of fluid in the pericardium. The heart was extremely small; the parietes of the ventricles were very thin, the muscular structure flaccid, and the valves all healthy.

The uterus had contracted within the pelvis, but it had not acquired its natural figure, it appeared dark colored; the parietes were extremely thin, and very soft, and the internal surface was in a sphacelated state. There was a small serous cyst in the right ovarium, the corpus luteum in the left.

1582 Uterus, to show the effects of inflammation and sloughing of the mucous coat ; the corpus luteum is shown. The bladder is preserved ; there was a large opening in it at its posterior part, near the termination of the ureters, this communicated with the vagina, and had been produced by the pressure of the head of a child in a former labor.

The patient, 32 years of age, was attended by a midwife, during the early stage of the labor ; it was a lingering case, and although the liquor amnii had escaped for some time, there did not appear any probability of the poor woman being soon delivered ; an accoucheur was called in, and the case was found to be an arm presentation, he turned the child, and delivered the patient. After this I was requested to see her. Her countenance was ghastly, and expressive of great anxiety ; pulse 80, but very small ; skin hot, tongue foul, body costive ; she complained of violent pain in the abdomen, and had rigors. Symptoms of inflammation of the uterus became very evident, accompanied with fever and rigors, and occasional vomiting. She was extremely restless.

The patient informed me of her having been delivered about eighteen months previous to the last labor, and that she had suffered from retention of urine, and was obliged to have it drawn off for five days after the labor ; afterwards, instead of passing in the natural way, it was voided through the vagina, which made her very wretched. The febrile action increased, accompanied with delirium, convulsions supervened, and she died.

The peritoneum was not inflamed. The liver was pale colored, and very soft in structure ; the gall-bladder greatly distended. The spleen healthy ; many of the mesenteric glands contained calcareous concretions.

The uterus had not contracted, as much as it generally does after so long a period.

The internal surface was nearly destroyed by ulceration and sloughing ; and many of the large veins were filled with pus, and the internal coat was highly inflamed. There were several strong bands of adhesion between the left Fallopian tube and the

posterior surface of the uterus, the effects of chronic inflammation, probably caused by the first labor.

The adhesion of the extremity of the Fallopian tube to the external surface of the uterus was so great as to have completely prevented its embracing the ovarium in actu coitûs; the corpus luteum was found in the right ovarium.

The muscular fibres of the bladder were very flaccid, and pale colored, probably occasioned by their want of action, the urine having passed through the vagina. The posterior part of the bladder was cut open to show the aperture which communicated with the vagina; it was situated at the posterior and inferior part of the bladder, between the openings of the ureters; its circle was equal to the size of half a crown, and the edges smooth and defined; this is shown in the preparation.

I have seen another case of the same kind.

When the aperture in the bladder is large, and so near the openings of the ureters, I think it would be highly imprudent to perform any operation with a view to remedy the defect.

I have found the introduction of a soft sponge into the vagina particularly useful in preventing the involuntary discharge of urine, and excoriation of the external organs of generation.

1583 External and internal organs of generation, with the sacrum, &c. &c. The labia and nymphæ, the vagina, verge of the anus, and a considerable portion of the rectum were destroyed by sphacelation, as was the neck of the bladder.

The uterus was healthy; a corpus luteum in the left ovary. In consequence of the integuments covering the sacrum having mortified, the inferior part of this bone became necrosed, and a portion of the bone, with the os coccygis, exfoliated; the spinal marrow became inflamed.

There was a considerable quantity of serous fluid between the arachnoid membrane and the pia mater, and these membranes were inflamed; there was about an ounce of the same kind of fluid in the ventricles of the brain.

All the thoracic and abdominal viscera were healthy. The poor woman, 30 years of age, had been nearly three days in labor; she was attended by a midwife; the

labor pains had ceased for six hours, she was greatly exhausted, and had not voided urine or fæces for twenty-four hours. An accoucheur was called in, who found the presentation of the child to be the face to the pubis, and as the bladder felt greatly distended, a catheter was introduced; four pints of very offensive urine were drawn off; she was delivered of a dead child. There was considerable hæmorrhage after the expulsion of the placenta. The day after her confinement she had a dejected countenance, and complained of great pain in the hypogastric region; she had not voided any urine, a catheter was employed, and about a pint of very offensive fluid was discharged; there was an offensive secretion from the vagina, showing that considerable mischief had been produced by the head of the child having been so long impacted in the pelvis.

Great swelling of the external parts of generation came on, the integuments were highly inflamed, as was the vagina, and there was a very copious discharge of fœtid matter, mixed with blood. The urine required to be drawn off twice a-day, and the bowels could not be relieved except by clysters. Every endeavour was made to benefit the patient without effect; she experienced agonising pain, the external organs began to slough, as did the vagina, neck of the bladder, and the inferior part of the rectum, so as to form a kind of cloaca for the fæces and urine, which caused the greatest misery and distress.

Fever of a typhoid type came on, which affected her brain. The nates mortified, although the greatest care was taken to prevent it; she died on the 14th day after delivery. If a practical accoucheur had attended at the commencement of the labor, all the dreadful consequences caused by ignorance would have been prevented.

1584 External and internal organs of generation, with the vagina, rectum, &c.

The labia, clitoris, and hymen shown, also the verge of the anus, the vagina, rectum, bladder, and the uterus; there is a pendulous serous cyst near the fimbriated extremity of the left Fallopian tube.

From a subject 14 years of age.

1585 External and internal organs of generation, with part of the bladder and rectum.

The labia externa are remarkably large, as are the nymphæ; there were several ragged excavations in the right nymphæ, and it was nearly separated from its base. There were several large verrucal growths on its surface, some of which had extended to the clitoris and its preputium; and similar growths had covered the verge of the anus, presenting altogether a very disgusting appearance.

The meatus urinarius was destroyed by syphilitic disease; the vagina was in a state of sloughy ulceration, and there was a large opening between the vagina and the posterior and inferior part of the bladder. The uterus and its appendages were healthy, the mucous coat of the rectum had been destroyed by ulceration, and there were several fistulous openings, some leading along this bowel, and passing from it into the vagina.

From a patient 60 years of age, who had suffered frequent attacks of gonorrhœa, and the different stages of syphilis, and had been often salivated. During the last sixteen months of her existence she experienced excruciating pain from incontinence of urine, which excoriated the external organs of generation, and the integuments of the thighs.

Her constitutional powers became greatly reduced, ascites supervened, and she experienced such difficulty in breathing, that it was thought necessary to perform paracentesis; fifteen pints of water were drawn off.

This afforded, for a time, temporary relief, but symptoms of disease in the lungs became very evident, and she died.

The peritoneum was covered with lymph, deposited in a granular manner, the effects of chronic inflammation; and there were eight pints of water in the abdomen. The liver was double the natural size, color yellow, structure soft. There were old standing adhesions in both sides of the thorax; the lungs were in several parts hepatised, and there were a great number of scrofulous tubercles. The pericardium contained six ounces of pus, and lymph had formed on its surfaces. The heart was of natural size, but the foramen ovale was widely open.

- 1586 External and internal organs of generation of a woman, with the bladder and rectum.
The principal parts of the labia and nymphæ were destroyed by sloughing phagedæna, as were the vagina, meatus urinarius, the verge of the anus, and a considerable portion of the rectum. The uterus was healthy, the ovaria were very dense in structure, and all the coats of the bladder considerably thickened.
- 1587 External organs of generation of a female; the hymen shown.
- 1588 External organs of generation of a female fœtus.
- 1589 External organs of generation of a fœtus; the hymen shown.
- 1590 An uterus. This uterus, in the anatomical arrangement of its structure, resembled some of the preparations and cases I have read of, which have been denominated double uteri, but it is inaccurate to say that any of them are double, as none have more than the appendages which a single uterus possesses. The body of this uterus was nearly the size of the gravid organ at the third month of gestation. The cavity was divided by a thin muscular septum, and a deciduous membrane had formed; there were two distinct mouths, similar to the uterus bicornis of some animals. The bloodvessels were greatly distended. The Fallopian tubes were filled with a glairy secretion, and their internal surface was very vascular; and there was a recent corpus luteum in both ovaries. The history of this case is not known. If the secretion in the Fallopian tubes and uterus had been carefully examined through a microscope of great power, perhaps the ova might have been detected.

FEMALE ORGANS OF GENERATION.

Comparative Anatomy.

- 1591 External and internal organs of generation of a monkey. The uterus of this animal resembles more closely that of the human subject, than that of any creature I have dissected.
- 1592 External and internal organs of generation of a monkey.

- 1593 Uterus of the talpa or mole.
The young moles and the placentæ are shown in the preparation.
- 1594 Uterus of a mole, at an early period of gestation. The urinary bladder is very small.
- 1595 Uterus of a cat, at an early stage of gestation, minutely injected. Some of the kittens, with the placentæ, are shown.
- 1596 Ovarium of a cat converted into a large scirrhus tumor. The omentum and kidney affected with the same disease.
See Section on Diseased Kidnies and Intestines.
- 1597 Uterus bicornis, with the rectum, of the English otter. The cervix uteri is very large; and the meatus urinaris terminates in the vagina, close to the os uteri. The internal coat of the vagina is extremely thick. At the extremity of the rectum there are two large anal sacs lined by cuticle.
- 1598 Organs of generation of the didelphis gigantea, or kangaroo.
- 1599 Organs of generation of a kangaroo, with the urinary bladder, &c.
- 1600 Organs of generation, with a part of the rectum, &c. of a hystrix, or porcupine. The uterus is formed of two horns; the vagina is very long; the rectum very capacious. The urinary bladder was very large; the meatus urinaris terminates at the inferior part of the vagina, just above the clitoris. The anal glands completely encircle the verge of the anus, they are very large, and conglomerate. The coats of the stomach and some of the intestines were partly destroyed, as was a portion of the rectum and vagina, in a manner similar to the change occasionally seen in the human stomach, and attributed to the action of the gastric juice.
- 1601 Uterus of a rabbit, injected.
- 1602 Uterus of a hare, at an early period of utero-gestation.
- 1603 Uterus of a rat, impregnated.
- 1604 Uterus of a mouse, impregnated.
- 1605 The Fallopian tubes, ovaria, and angles of the uterus of a mule. The ovaria are very small.
- 1606 A portion of the uterus of a sow, with the membranes, &c. minutely injected. A beautiful preparation.

- 1607 A portion of the uterus of a sow, minutely injected ; it is dried and preserved in spirit of turpentine.
- 1608 A portion of the uterus of a pregnant sow, minutely injected with size and vermillion. In the same bottle there is a young pig, with the umbilical cord.
- 1609 Os uteri of a pregnant cow, with a portion of the vagina. This preparation shows the beautifully plicated arrangement of the internal surface of the vagina, also the mucus secretion in the cervix uteri, which hermetically closes the os uteri during the period of gestation.
- 1610 Cotyledons of a cow and a sheep, also one of the papillæ minutely injected.
- 1611 Papillæ of a sheep, minutely injected.
- 1612 A portion of the chorion of a sheep, minutely injected with size and vermillion ; it is dried and preserved in spirit of turpentine. Some of the placentulæ are injected. This is a very beautiful preparation.
- 1613 Female organs of generation of a very young crocodile. The clitoris is very small, and grooved. The ureters terminate in the cloaca ; there is no urinary bladder. The cloaca is very capacious, and the aperture which forms the distinction between this part and the rectum is very small.
- 1614 Organs of generation of a large tortoise, with the kidneys, urinary bladder, part of the cloaca and rectum. The clitoris is small, and it resembles exactly the large penis of the male ; the urethra is grooved. The bladder is very large, and divided into two portions, as in frogs.

IMPREGNATED UTERUS.

- 1615 Uterus, with an embryo of about the 3rd month ; the ovaria affected with fungus hæmatodes, &c.
The liver seemed to occupy the principal part of the abdomen, and firm adhesions had taken place between its serous covering and the under surface of the diaphragm. Nearly the whole of the natural

structure of the liver had been superseded by the production of medullary and fungoid tubera, which projected considerably from the external surface of the organ, and many of which had acquired the magnitude of moderate sized oranges. A section of the liver showed that the tumors were contained in dense and highly vascular cysts, a fact which was more distinctly seen, from the arteries having been injected with size and vermillion. The gall-bladder contained a small quantity of a viscid dark-colored secretion. In the substance of the pancreas there were moderate sized tumors, and several small ones of a scirrhus structure. Some of the mesenteric glands were converted into medullary tumors.

The spleen retained its natural appearance, and in the right kidney there were medullary tubercles. The uterus was healthy, its mouth widely open, and the placenta partially detached. The right ovary was considerably enlarged, and its natural structure was destroyed by fungoid and scirrhus tumors and serous cysts.

The left ovary was nearly as large as the other, and similarly affected. The Fallopian tubes were pervious. The patient, 30 years of age, had borne several children, and had enjoyed good health until within the two last years of her life, when symptoms of disease in the liver came on, accompanied with a disordered state of the digestive organs generally.

During the last four months her health declined rapidly, and she became greatly emaciated, without however showing any signs of ascites, œdema, or jaundice.

About a fortnight previous to her death, the bodily powers gradually sank, her mind became perturbed, she took little nourishment, and the pulse was 150, and extremely weak.

Twelve hours before her dissolution uterine hæmorrhage commenced, and a fœtus between the 3d and 4th month was expelled, which was in a putrid state.

The history of this case, with observations, were published in the Transactions of the Royal Medico-Chirurgical Society, Vol. 18.

1616 Gravid uterus, at about the 4th month.

The decidua, chorion, and amnion are shown, as is the fœtus in situ. The corpus luteum is likewise exhibited. This is a beautiful preparation.

The history of the case is not known.

- 1617 A gravid uterus, at about the 5th month, minutely injected. The decidua, chorion, and amnion shown. The fœtus was removed from the uterus, and is seen at the bottom of the bottle, with the umbilical cord. The right kidney is also preserved; it is affected with fungus hæmatodes, and is injected.

This is a very magnificent preparation.

The patient, 36 years of age, had been suffering severely for nearly four months with great difficulty in voiding urine, accompanied with violent pain in the loins, and frequent sickness, the latter was supposed to be occasioned by pregnancy; it was frequently mixed with blood. Her health became affected, countenance sallow, and she was emaciated; on examining the hypogastric region, there was not that degree of prominence felt, which is noticed in pregnancy at the 5th month.

The difficulty in voiding urine increased daily, retention came on, and it was necessary to draw off the fluid; this was effected with great difficulty, owing to misplacement of the meatus urinarius.

There was a considerable quantity of blood mixed with the urine. With a view of ascertaining the real cause of this obstruction, I examined the vagina carefully, and found the uterus to be retroverted. Having been so fortunate in two cases of retroversio uteri as to succeed in replacing the fundus of the uterus above the brim of the pelvis, and the patient having afterwards completed the period of gestation, I formed strong hopes of being successful in this instance. But in the present case the uterus was so completely impacted, that I found it quite impossible to alter its position.

As it was not likely that the changes which this organ undergoes in the gravid state, would be carried on in the pelvis, and the patient's state of health becoming daily more seriously affected, I deemed it prudent to bring on, if possible, premature labor, by letting out the liquor amnii. In a few days after this, symptoms of labor seemed to be coming on

and the urine was voided naturally, but it was always mixed with blood, which reduced her bodily powers. All signs of labor ceased, she gradually sank, and died.

The peritoneum was thickened by chronic inflammation, particularly those parts which cover the pelvic viscera. The fundus of the bladder was situated greatly above the brim of the pubis, the muscular coat extremely thick, the internal coat inflamed and thickened. So completely did the uterus occupy the pelvis, that it was a matter of astonishment (to all present at the inspection) how the bladder and rectum could have performed their functions.

The fundus of the uterus was situated at the inferior part of the sacrum, proving that it was retroverted. In consequence of the irritation which the increasing bulk of the uterus had occasioned in such an unyielding cavity as the pelvis, inflammation of the serous covering had been produced, lymph effused, and such firm adhesions had been formed as to make it very difficult to remove the pelvic contents for inspection. The parietes of the uterus were very thin, but not unhealthy in structure. At the posterior part of the uterus near its cervix, and beneath its peritoneal surface, there was a fibrous tumor, about the size of an apple, of a character frequently seen in the uterus. The corpus luteum was in the left ovarium. The right kidney was affected with fungus hæmatodes, the left kidney normal.

There were several fungoid tubera in the liver, all the other viscera healthy.

The fœtus presented a shrivelled appearance, and the cuticle had separated, but it was not putrid, proving that it had been dead for some time. Probably the life of the child had been destroyed by the pressure of the uterus.

1618 A portion of the chorion of a morbid ovum, showing an innumerable quantity of vesicles, of various sizes, formed upon the extremities of the ramified tufts of this membrane.

The woman, 50 years of age, who had borne several children, imagined herself again in the family way, the menses having ceased.

At about the 7th month from the cessation of the

menstrual period, she was taken with symptoms of labor, and voided an immense mass which appeared to consist of a morbid placenta, with a great quantity of coagulated blood. This morbid growth having been well macerated, and the coagula being washed away, it was found to be a false conception, there being no signs of a foetus.

There was considerable hæmorrhage during the expulsion of the contents of the uterus, and for some days afterwards, which could not be suppressed by any means that were employed; the poor woman gradually sank, and died on the 12th day from the commencement of the hæmorrhage. The body was not inspected.

The serous cysts appear like very small bunches of white grapes, with this difference, that they are filled with a transparent fluid.

Dr. William Hunter, Dr. Denman, and many other distinguished authors, have erroneously considered these cysts to be hydatids.

This is a very valuable preparation.

DEVELOPEMENT OF THE OVUM.

- 1619 An ovum, at about the third week after conception, showing the chorion and the amnion.
- 1620 An ovum, at about the third week, the chorion and amnion shown, with the rudiments of the embryo.
- 1621 An ovum, at about a month.
- 1622 An ovum, at about the fifth week, the embryo very imperfect.
- 1623 An ovum, at about the sixth week, the chorion and amnion shown; the umbilical cord was present, but there were no signs of an embryo. This is what is termed a false conception,—pseudocyesis.
- 1624 An ovum, at about the sixth week, the chorion and amnion shown, also the umbilical cord; the embryo not present. A false conception.
- 1625 An ovum, at about the sixth week, the decidua, chorion, and amnion shown, but the embryo not developed.
- 1626 A morbid ovum, at about the sixth week; there was an

effusion of blood between the decidua and chorion, which was firmly coagulated, and there were no signs of an embryo.

- 1627 A morbid ovum, similar to the one last described, and at the same period of gestation.

Both these ova were expelled at different periods from the same person, and the hæmorrhage in both cases was very profuse.

- 1628 An ovum, at about the 7th week, the decidua, chorion, and amnion shown, and the umbilical cord, but there were no signs of an embryo. A false conception,—pseudocyesis.

It is very difficult to account for what has been termed false conceptions, all the involucra of the ovum and the umbilical cord are perfectly developed, yet there is no appearance of an embryo. Are these strange changes produced by excitement without intercourse, or had the life of the embryo been destroyed by some cause in the uterus?

- 1629 An ovum, at the 8th week, the decidua removed to show the vessels belonging to the chorion.

- 1630 An ovum, at about the 8th week, the chorion and amnion shown, also the embryo.

The fœtus was shrivelled; this was easily accounted for by the mother having suffered from profuse uterine hæmorrhage for several days previous to abortion.

- 1631 An ovum, at the 8th week, containing twins. The chorion and amnion preserved.

- 1632 An ovum, the decidua shown, also the chorion and amnion. The embryo was shrivelled and discolored, proving that it had lost its vitality by blood having been extravasated between the decidua and the chorion.

- 1633 An ovum, at about the 9th week, the chorion and amnion shown, also the embryo.

- 1634 An ovum, at about the 10th week, the decidua, chorion, amnion, and the embryo, are in the preparation. This is a very beautiful specimen.

- 1635 An ovum, at about the 10th week; all the involucra are natural, and an umbilical cord formed, yet there is no appearance of an embryo.

- 1636 An embryo, at about the 10th week, liver shown.

- 1637 An embryo, between the second and third month.

The head was of enormous size, which was found on dissection to have been occasioned by an accumulation of water in the ventricles, and an effusion of blood between the arachnoid, lining the dura mater, and that covering the pia mater. The viscera of the thorax and abdomen are shown, also the testes, which are very large for the age of the embryo.

This is a very curious specimen.

- 1638 An ovum, containing twins. The mother had given birth to several children; she imagined she had advanced to the third month of pregnancy previous to the miscarriage.

For several weeks she had uterine hæmorrhage. The embryos were shrivelled; the cuticle had separated, and the integuments were partly putrid, proving that they must have been dead for some time.

- 1639 An ovum, at about the 3rd month, with twins. The decidua presents a granulated appearance, the embryos were flattened, and the cuticle had separated, which was accounted for by the liquor amnii having escaped about three weeks previous to abortion. There was in this instance only one placenta.

The umbilical cords are extremely small.

- 1640 An ovum, at about the 3rd month, according to the calculation of the woman; but the embryo is not larger than one at eight weeks, and blood had been extravasated between the decidua and the chorion, which had become firmly coagulated, and formed into small round bodies, as is seen in the preparation; I have examined several similar morbid changes. This appearance has been termed "apoplexy of the ovum."

The patient had suffered from uterine hæmorrhage for nearly two months previous to miscarriage.

- 1641 A diseased ovum, without an embryo; the termination of the villi of the chorion were formed into serous cysts.

The woman from whom this morbid ovum was expelled, had suffered greatly, previous to its expulsion, from uterine hæmorrhage, which injured her health. She was 29 years of age, and had given birth to three living children. She imagined that she had, in this

instance, advanced to the third month of pregnancy ; there was considerable hæmorrhage during the miscarriage, and for some time afterwards.

The ovum was thickly covered with coagulated blood ; after this was removed, and the parts macerated, the decidua was found to be of a dark red color, and detached from the chorion. On unravelling the arteries belonging to the chorion, their extremities were seen to terminate in small vesicles, or serous cysts. These vesicles were filled with a transparent fluid.

Some of the arteries of the chorion are filled with size and vermillion, and some of the injection has entered the vesicles.

- 1642 An embryo of about the 3rd month; the external muscles are shown. A female.
 - 1643 A male embryo of about the 3rd month ; the skeleton, thoracic, and abdominal viscera in situ.
 - 1644 A male embryo of about the 3rd month.
 - 1645 A male embryo, 4th month, the umbilical cord and a portion of the chorion shown ; spina bifida in the cervical vertebræ connected with hydrocephalus.
 - 1646 An embryo, 4th month. It is preserved in alcohol, which shows the vascularity of the skin.
 - 1647 A fœtus, with the placenta, between the 4th and 5th month. The mother of this child quickened about the fourth month, after this period she ceased to feel its motion ; she did not increase in size, and her health was much disturbed till she was delivered at the full period of gestation. During and after the labor there was violent hæmorrhage, which with difficulty was suppressed ; the fœtus and placenta were expelled together.
- The fœtus was greatly disfigured, the cuticle had separated, and the muscles were softened, which proved it to have lost its vitality for a considerable length of time. The placenta is very small, the amnion is shown. Most probably the placenta had been detached from the uterus ever since the 5th month, and the liquor amnii had escaped, or had been absorbed.
- 1648 A fœtus (female) 5th month, with the placenta.

The decidua shown, and the chorion partly unravelled.

- 1649 A fœtus, at the 6th month, with the placenta; the decidua is shown, and the fœtus is placed in the position it naturally occupies in utero.

This is a beautiful preparation.

- 1650 A fœtus, about the 6th month, it is greatly disfigured. There are three placentæ in the bottle. The mother was delivered of three children, two were born alive at the full period of gestation, the other had lost its life at about the 6th month, its body was greatly flattened, and the cuticle had separated. The placentæ belonging to the living children are injected with size and vermilion, and the vessels partly unravelled, but the injection did not enter the placenta belonging to the dead fœtus.

This is a very curious preparation.

- 1651 A fœtus (male), with the placenta beautifully developed, between the 6th and 7th month.

- 1652 Skeleton of a fœtus, at the 7th month. The bones injected with size and vermilion.

- 1653 A fœtus. The following parts are shown in the preparation. The thyroid and thymus gland, heart, and lungs, stomach, and some of the intestines. The substance of the liver was removed by pressure, to show some of the vessels. The bladder, urachus, hypogastric arteries, and the umbilical vein are preserved, also the kidneys and the renal capsules, the testes and gubernacula. For nearly two months previous to the miscarriage, the patient had complained of pain in the abdomen, accompanied with sickness, and her health became affected.

It was noticed that her abdomen was not so prominent as it generally is at the 7th month of pregnancy, and she had not felt the sensation of quickening. At the 8th month symptoms of labor commenced, accompanied with profuse hæmorrhage; the fœtus, with the placenta were expelled, and the uterine hæmorrhage was so great as to threaten extinction of life. A bandage was applied to the abdomen, and cloths with vinegar and water, and a sponge with the same fluid were frequently introduced into the vagina. This plan of treatment was employed for a considerable length of time; it had the

effect of suppressing the hæmorrhage, and the patient recovered. The death of the fœtus I think was caused by the separation of the placenta.

The fœtus was not more developed than one at the 5th month, it as well as the placenta was nearly in a putrid state, which might account for the symptoms and disordered state of health the patient suffered previous to the miscarriage.

MALFORMATIONS OF THE EMBRYO.

- 1654 Skeleton of an acephalous fœtus, the vertebræ bifid.
A female, about the 5th month.
- 1655 Base of the cranium of a brainless monster, the bones injected with size and vermillion. On the right side the tympanum is shown, on the left the ossicula auditus. A fœtus, between the 6th and 7th month.
- 1656 A malformed fœtus, about the 7th month, it was still-born.

There was no forehead or cranial convexity; the eyebrows were on a level with the upper surface of the head, which produced an unsightly appearance. The integuments of the scalp at the anterior part were thickly covered with hair, but from this part, and in a line with the spine, they were wanting, and only the thecæ vertebralis seen.

On cutting open these tunics, an aqueous fluid escaped, but there was no appearance of medulla spinalis, yet there were seen a number of minute nerves and blood-vessels; their origins were not satisfactorily traced.

There was no spinal canal, the bodies only of the vertebræ were formed, and there were two oblique curvatures, which are shown in the preparation. The common bones of the cranium were extremely small, and very irregular in figure; and instead of the external surfaces being convex they were concave, which I have frequently noticed in similar monsters. The brain was wanting, yet the nerves were present, though extremely small.

The thoracic and abdominal viscera were normal, and

the superior and inferior extremities were perfectly developed, also the nerves.

- 1657 A specimen of complete deficiency of the encephalon and its bony coverings, with the neck, and part of the thorax.

Most of the nerves of the brain were seen, but they were all extremely small; the optic nerves very diminutive; the retinae not present. The medulla spinalis small, the nerves forming the axillary plexus were large and looked healthy.

In consequence of a deficiency of four of the cervical vertebræ, the neck appeared greatly shortened. The par vagum, phrenic, great sympathetic, intercostal, and nerves of the inferior extremities were all perfect. All the viscera were natural, and the large intestines contained meconium.

A fœtus, about the 7th month.

- 1658 A malformed fœtus, about the 7th month, which was still-born. Most of the bones of the cranium wanting, also the brain; the cervical nerves extremely small, except the optic, which were nearly of a natural size. Most of the cervical vertebræ were wanting, which made the child appear to be without a neck, the spinal canal was very small, it contained only the theca vertebralis; there were no signs of spinal marrow.

It is interesting that the axillary plexus of nerves on both sides were natural in size, as were the nerves belonging to the inferior extremities, which are preserved in the preparation. The par vagum, great sympathetic, and phrenic nerves were large. The heart was situated on the right side of the chest, it was rather large, and the arch of the aorta very capacious. The right auricle large, the left small, there was a free communication between them, without any signs of a foramen ovale having ever existed. There was also a free opening between the ventricles, owing to an imperfection in the septum ventriculorum, near the origin of the aorta. The lungs were natural, the liver large, and solid in structure; the division of the lobes not regular. The intestines were situated in the left hypochondrium; the cæcum and its appendix were found on a line with the left kidney, which is seen in

the preparation. A portion of the umbilical cord and its vessels shown, also the urinary bladder and urachus, likewise the uterus. This is the most singular specimen of malformation I ever examined.

As the upper and lower extremities were not malformed, they were removed to give a better view of the deviation of Nature's laws in the different viscera.

- 1659 A most remarkable specimen of malformed fœtus. The mother of this child was delivered of twins, the one I shall describe was still-born, the other was at the full period of utero-gestation and alive. There were scarcely any signs of cranium, except the base, and the two portions of the ossa petrosa belonging to the temporal bones. The brain and medulla spinalis were wanting, and all the external portions of the vertebræ. There was also a complete want of integumental covering to the central line of the back in the situation where the vertebral column should have been, and this defective part was covered with a dark-colored delicate membrane, which extended from the neck to the sacrum. This defect I have often noticed in the malformed fœtus, where there was a want of brain and spinal marrow, and a deficiency of spinous processes throughout the whole vertebræ.

This membranous production was cut open, which showed it to be an imperfect theca vertebralis, and there were seen several small blood-vessels and minute nerves on its internal surface, but their connection I was unable to trace.

From the shortness of the neck of this imperfect fœtus, it appeared that some of the cervical vertebræ were wanting. This fact I have noticed in several monstrous productions of a similar kind, which will be described. The most singular malformation of parts, was a diminutive and imperfect appearance of fœtal features, as eye-lids, nose, and mouth.

The superior and inferior extremities of the body varied greatly in proportion, and natural arrangement. On the right side, which was much smaller than the left, the soft parts were removed, to show the osseous parts belonging to them.

In the arm the os humeri was very diminutive, the

radius and ulna very short and joined together, and the thumb and index finger were wanting. The bones belonging to the lower extremities were natural.

The left arm was greatly deformed, it was very short, and resembled a malformed fœtal thigh and leg; the hand looked like a foot, with the great toe and two small ones, which appearances are seen in the preparation.

There were no signs of a heart or lungs, nor any appearance of a diaphragm. The œsophagus was very narrow, the stomach small, and the intestines were coiled into a confused mass, so as to make it impossible to distinguish the small from the large without unravelling them, except the rectum, which was distinct.

On examining the pelvic contents, the bladder was found, but there were no signs of uterine organs, although the external parts of generation were developed.

1660 A child, at the full period of gestation. Its body well developed, as far as size, but the bones belonging to the cranium were defective, and there were no signs of a brain. The spine was bifid as far as the sacrum. The feet deformed.

1661 A monstrous male fœtus.

The child was still-born; the labor was extremely lingering, occasioned by the immense size of the fœtus. It was the most grotesque looking creature of the kind I ever saw. The extremities were perfectly formed, but rather diminutive in size. The abdomen was of immense magnitude, especially in the hypochondriac regions. The vault of the cranium was quite flat, the common bones were present, but very diminutive, and rudely formed, and there was a large round aperture in the posterior part of the occipital bone, which allowed of a protrusion of the membranes belonging to the brain, which appeared highly inflamed. The brain was extremely small, very thin, and had only one cavity, which was filled with a bloody fluid, and communicated with the pouch of membranes projected through the aperture in the occipital bone.

The vertebræ of the spine were perfect, as was the

spinal marrow. The most singular appearances were in the abdomen. The liver was of a mottled bluish red color, and much smaller than we find this viscus in a full grown child. The spleen was very large, and possessed the same appearance seen in the liver, the other viscera healthy. The parts which had occasioned the immense abdominal enlargement were the kidneys, and they were of surprising size, as seen in the preparation.

The external surface of the kidneys presented a nodulated appearance, but by removing the capsules, it was seen that this deviation from the natural structure was occasioned by the formation of innumerable serous cysts in the cortical and medullary substance of the organs, a morbid change I never before observed in an infant, but frequently in adults. The organs of generation, the bladder, urachus, and the umbilical cord, are preserved in the preparation. The parietal bones are also preserved in this specimen.

The mother of the child produced another monster afterwards, a false conception, although she had previously given birth to several well formed children.

1662 A female child, remarkably large, with hydrocephalus and spina bifida.

In consequence of the great size of the head, the labor was very lingering, the child was dead.

On opening the head, which was easily done, the bones being so much separated, the cerebrum was found not more than an inch in depth, having been expanded by an immense accumulation of water, (12 ounces) in the lateral ventricles, the rest of the brain was extremely soft. There was a free communication between the calamus scriptorius, and the theca of the spinal canal, so that the water could be pressed from the head into the protuberance of the spina bifida. The contents of the cranium were removed; afterwards the cavity was filled with horse-hair, so as to resemble the size and form it bore before the brain and its contents were removed. There was an extensive spina bifida in the inferior dorsal and lumbar vertebræ, and the sacrum was bifid.

- 1663 A malformed foetus, between the 6th and 7th month. The head and superior extremities were perfect, the inferior deformed, and the legs turned round on the lower part of the spine. There was a large spina bifida between the lumbar vertebræ, and the canal of the sacrum.

The heart was of an irregular figure, its apex, instead of being acute, was obtusely rounded, as in some animals. The abdominal parietes were imperfectly developed near the umbilicus, which allowed a portion of the stomach and intestines to protrude as in hernia. The placenta is shown; the cord not separated.

This is a very whimsical looking monster.

- 1664 A malformed foetus, sent from Calcutta.

The child died soon after birth, it was of the usual size noticed at the 9th month; the skin was of a dingy brown color, and the hair on its head of a brownish black hue, and long. The principal defects in its external figure were its appearing to have only one leg, the left, the toes being irregularly placed, and six in number. At the posterior part of the leg, in a line with the fibula, there was a projection, not unlike an imperfect great toe, which extended as low as the heel. What was most singular, was an elongation of the integuments, resembling a tail inclined upwards, and about an inch and a half in length, near the situation of the verge of the anus, but that aperture had not been formed. There were no signs of genital organs. The umbilical cord was very small.

The following are the appearances which presented on examining the viscera of the thorax and abdomen. The heart was very small, and its apex obtuse, the foramen ovale and ductus arteriosus were widely open. The lungs solid, there were no signs of a diaphragm, nor any appearance of liver, spleen, or kidneys. The stomach and small intestines were natural. The cæcum with its appendix on the right side, the transverse arch of the colon terminated abruptly in a cul de sac, in the right iliac fossa, and there were no signs of a rectum. There was no appearance of a penis or scrotum, but there was one testis within the abdomen.

On dissecting the leg and thigh, to show the bones belonging to these parts, the os femoris, tibia, and fibula, were seen to be misplaced; the posterior surfaces of each being situated on a line with the anterior part of the abdominal parietes, and the foot was turned outwards. The appearance of the toe-like projection near the heel, was found by dissection to have been occasioned by a growth of bone, having its origin from the posterior surface of the condyle of the femur, in a line with the fibula, and producing the appearance of an imperfectly formed leg; these appearances are preserved in the specimen.

There were only two vessels belonging to the umbilical cord, an artery and a vein.

1665 A mal-formed male fœtus.

The child was still-born, at the full period. The left side of the body was considerably larger than the right, particularly the superior and inferior extremities. The fore-arm on this side only measured two inches, there being a deficiency of formation of the carpal extremities of the ulna and radius, also of the carpus, and the thumb was wanting; both the feet were deformed.

There was no appendix cæci, the rectum terminated in the bladder at its fundus, and the large intestines were distended with meconium. There was only one umbilical artery, which was on the left, or perfect side of the body; it was nearly as large as the aorta. The head was removed to examine the osseous structure; the bones on the left side are more developed than those on the right.

The arteries were injected with size and vermilion. The liver is minutely injected.

The mother of this child had a distorted pelvis and spine, and was very diminutive in stature; I do not infer from these bodily defects that they had any thing to do with the deformity of the child.

Children are occasionally born with an imperforate anus, in some instances the defect is remediable by an operation; but in a case similar to this (and some others I have before described) it would not have saved the child's life.

MAL-FORMATION AMONG THE LOWER ANIMALS.

- 1666 A monstrously formed young pig, which only lived a few hours after its birth. The deformity is in the head, which in figure in some degree resembles that of an elephant. The frontal and parietal bones project perpendicularly, presenting a conical shaped high forehead.

The eyes are very small, and the eye-lids of a dark color, as is the face and ears, which gives a most singular appearance to the animal, the rest of the skin is white, and free from hair. The extremity of the nose and upper lip projects considerably, resembling on a small scale the trunk of an elephant. There are no signs of nostrils, the tongue protrudes beyond the lips, the under lip is curved upwards, and it does not possess the least appearance of that of a pig's. The fore and hinder feet were not bisulcated. The thoracic and abdominal viscera were normal.

- 1667 Two young pigs, the heads and bodies united.
The heads, necks, and faces intimately united sideways.

The bones of the calvaria were wanting, but the membranes and nerves belonging to a brain were present; the nerves were extremely diminutive, and the base of the cranium, which appeared to be formed by portions of each, was extremely narrow, as seen in the preparation.

There was only one ear and a single eye to the two heads, and only one fore leg to each body; the thorax and abdomen were united, the hinder parts of the body were distinct, and the extremities natural.

One was a boar, the other a sow.

- 1668 Two young pigs united.

There is only one head, which is very large; there were two ears in the natural situation, and there were two well developed ears in the integuments of the scalp at the occipital part, close to each other. The thorax and abdomen were closely conjoined, there were two fore legs to each pig, and the hinder extremities were natural. They were sows.

If the head of this pig had been dissected, it would have been probably found that it had been formed by an union of one half of the cranium of each pig.

- 1669 Two young pigs joined in one.
 There appears to be only one head with ears, yet I think on dissection it would be found to be formed by half a head of each pig.
 The thorax and abdomen are united, and there are four anterior and posterior legs.
 The hair on the body black, that on the legs white.
- 1670 Two young lambs, united at the thorax.
 There was only one heart to supply both the animals, which was injected with wax, &c. it is preserved in the preparation.
 The head is very large, the teeth shown.
 There are two necks, the thorax of each were united, the legs all natural in figure and number. They were males.
- 1671 Head of a slink calf, injected with size and vermillion.
 The upper lip bifid, as in hare-lip.
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STRUCTURE OF THE PLACENTA.

- 1672 Sloughs, like portions of decidua uteri, which were voided several days after labor.
- 1673 A portion of placenta, not injected, arteries of the chorion partly unravelled.
- 1674 A portion of placenta, injected with size and vermillion.
- 1675 A placenta, minutely injected with size and vermillion.
- 1676 A portion of placenta, minutely injected.
- 1677 A placenta, injected with wax, &c. the arteries of the chorion are not unravelled.
- 1678 A placenta, injected with size and vermillion, the arteries of the chorion are partly unravelled.
- 1679 A placenta, arteries and veins injected.
- 1680 A placenta, arteries and veins injected with wax, &c.
- 1681 A placenta, arteries and veins injected with wax, &c.
- 1682 A double placenta, the arteries and veins injected.
- 1683 A double placenta, arteries and veins injected with wax, &c.
- 1684 A double placenta, arteries and veins injected.
- 1685 A portion of umbilical cord, a knot had been formed on it in utero, which had completely prevented the circulation of the blood-vessels, and caused the death of the child.

MAMMARY GLANDS.

Morbid Anatomy.

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- 1686 Part of a scirrhus tumor, with the nipple ; removed by operation.
The nipple was shortened and puckered, the tumor was very large, and had all the character of cancer. The disease recurred, and the axillary glands became affected, as did the lungs ; the patient died six months after the operation.
- 1687 A portion of scirrhus breast, with the integuments and nipple. The nipple was greatly enlarged by the morbid growth, which is shown in the preparation.
- 1688 A scirrhus tumor, with the integuments, it was extirpated.
- 1689 Two sections of carcinoma in the mamma, with the integuments and nipple.
- 1690 Mamma, affected with carcinoma. The breast was extirpated. A section of the parts presented carcinomatous tubercles of various sizes, and the nipple was greatly retracted. The patient was a single woman, 41 years of age, and naturally of a robust habit ; she had generally enjoyed good health, except occasionally, being so plethoric as to require abstraction of blood, either by cupping or venesection.
- The disease in the breast had been making progress for nearly three months previous to her consulting me. She had experienced great uneasiness during the last three weeks, the malady had become more severe, and she felt pain in the axilla of the same side.
- A variety of means were employed to alter the state of the parts for about three months, which seemed to lessen her suffering for a time ; but the pain in the breast became more distressing, affected her health, and made her anxious to submit to an operation.

A distinguished surgeon was consulted, who examined the parts very carefully, his opinion was "that the breast and the axillary glands ought to be removed." I extirpated the breast, but did not think it necessary to remove the axillary glands, as I felt inclined to imagine that they were only sympathetically affected. I entertained this opinion from the disease being of short duration, and from having seen the axillary glands enlarged in similar cases, and resume their normal size after the removal of the diseased breast.

The glands in the axilla, soon after the operation, became natural, the wound healed favorably, and the patient enjoyed good health for nearly three years, when she began to complain of pain in the region of the kidneys, which she imagined was the effect of rheumatism. Cupping and suitable remedies were employed, which did not afford relief, and a considerable quantity of uric acid was voided with the urine; the patient felt some difficulty in using the inferior extremities, and her health was affected. Although she was naturally very corpulent, her bulk gradually diminished.

Subcarbonate of magnesia, with liquor potassæ, were prescribed, and the liquor opii sedativus when the pain was violent, which lessened her sufferings, yet a great quantity of gravel was voided. At this period several hard small tumors began to appear in the integuments of the chest, which became painful, and increased gradually. The ung. pot. hydriod. was used for some time, which seemed to lessen the size of the tubercles, but similar growths formed beneath the clavicles, and the left breast became affected with all the signs of carcinoma. Her health gradually declined, her sufferings were great, and they could only be mitigated by morphia. Ultimately the lungs became affected, the expectoration was of a sero-purulent character, the respiration laborious, and she died.

The patient bore the operation and the whole of her affliction with Christian fortitude, and her mind was not affected during her illness. The body was greatly emaciated, the skin very yellow. There were several various sized tubercles of a scirrhus

kind, varying in size from a hemp seed to a marble, in the integuments of the chest. The left mamma was reduced to a very small size, the nipple not being depressed. A section of the part showed it to be composed of a great number of cancerous tubercles, and no part of the natural structure could be seen. The axillary glands were natural. There was a considerable quantity of fluid in both sides of the chest.

Beneath the serous covering of the lungs there were a great number of small scirrhus deposits, which nearly effaced its natural structure; the same change had taken place on the diaphragm.

The lungs were nearly consolidated by sero-purulent infiltration, and there were a great number of minute scirrhus tubercles in the cellular media; the lining of the bronchial tubes and trachea was highly inflamed. Both the kidneys were greatly inflamed. I have given a somewhat lengthy description of this case, as I consider it, in many practical points, to be very interesting.

1691 The diseased breast above described.

1692 Carcinoma of the mamma, the nipple very small and retracted. The breast was extirpated, but the patient died from the extension of the disease to the axillary glands and the lungs.

In the same bottle there is a specimen of genuine carcinoma in the breast, with a portion of the pectoral muscle and integuments; the disease recurred, and the lungs became affected, which caused death.

693 Mamma affected with carcinoma, the nipple shortened and retracted.

The patient was 50 years of age; she had given birth to four children. The disease in the breast commenced about two years previous to her death. A small hard tumor was felt in the mamma, near the nipple, it gradually increased, and ultimately became painful, and her health gradually became impaired. Various modes of treatment were employed to disperse the tumor, but without effect, the swelling and pain increased. Four eminent surgeons were consulted, they considered the disease of a malignant kind, and advised the removal of the

breast. I performed the operation, but I did not entertain the least hope of its proving successful from having seen many similar cases terminate fatally.

There were no unfavorable symptoms after the operation; the health and spirits improved; the wound, which was very extensive, soon granulated, and the healing process went on well. The patient continued in good health for nearly three years from the time of the operation; after this her health declined, and she experienced several bilious attacks, followed by dyspepsia, and her skin became sallow. These symptoms were succeeded by a distressing cough and dyspnœa, and there was a profuse expectoration of mucus, frequently mixed with pus; she had also symptoms of a diseased liver.

The patient became greatly emaciated; symptoms of hectic fever came on, which terminated her existence. Permission could not be obtained to examine the body. I have no doubt that the lungs, liver, and mesenteric glands were affected with the same disease as in the mamma. The following are the appearances noticed on examining the morbid part. There were a great number of small scirrhus tubercles in the integuments, which were removed with the diseased breast, and there were the same appearances in the cellular tissue between the internal surface of the integuments, and the external surface of the tumor. The principal part of the structure of the breast had been converted into hard tubercles, of different sizes, and there was a cyst containing a gelatinous secretion.

1694 Mamma, affected with carcinoma, the nipple was so much retracted, that the integuments belonging to it were alone seen.

Not a vestige of the natural structure of the breast could be traced, the whole mass being formed of aggregated tubercles, of different figures, the largest was not bigger than a hazel nut, and there were a few serous cysts in the morbid growth.

From a patient 64 years of age. The uterus was affected with cancer.

Some Pathologists have stated, that the puckering in

or retraction of the nipple is a sign of malignant disease of the breast. This I do not think a correct diagnosis, as I have seen the nipple project naturally in the worst cases of cancerous mammae, and it is seldom diseased ; I have seen the papillæ very short in healthy breasts.

1695 Mamma, affected with carcinoma.

The skin was immensely thickened, and presented that fibrous appearance said to characterise carcinoma. There had been a large collection of fluid in the centre of the disease near its surface, and a sensation of fluctuation having been felt at this part by the Surgeon who attended the patient, a large opening was made through the integuments, and a great quantity of gelatinous fluid permitted to escape. As the rest of the tumor felt extremely dense, and had occasioned great pain, it was thought prudent to remove the breast. A few months after the operation, the disease recurred, and caused death. The opening in the integuments, as well as a part of the cyst which contained the gelatinous secretion, are seen in the preparation. I think that if the real nature of the disease had been ascertained, the first operation would not have been performed.

1696 Mamma converted into carcinoma ; there were a great number of scirrhus tumors in the skin, and the integuments which had covered them had sloughed ; the edges were greatly thickened. These appearances are well shown in the preparation. The breast was destroyed, and a cancerous tumor, not much larger than a walnut was seen, but the disease (in this instance), had affected the nipple, and it was retracted. A bristle is placed into one of the apertures, which had belonged to one of the excretory ducts. Many other parts of the body were affected with the same disease.

This is a splendid specimen of tuberculated cancer. It was removed from an old woman ; the history of the case is not known.

1697 Carcinomatous mamma, with the axillary glands. In the same bottle there is a scirrhus ovarium. From a patient, 47 years of age, who had been afflicted with carcinoma of the breast for nearly two

years. The lungs contained a great number of medullary tubera, and the pancreas was affected with the same disease; the ovaria were converted into large cancerous tumors, and there were serous cysts near the extremity of the Fallopian tubes.

This is the most dense scirrhus breast I ever examined. The history of this case was published in the Transactions of the Royal Medico-Chirurgical Society.

1698 Mamma, affected with carcinoma, the nipple not diseased. The tumor was formed of aggregated tubercles, of different sizes, which are shown in the specimen; there was an abscess in the substance of the tumor, at its external surface, near the situation of the nipple. The uterus was affected with the same disease.

1699 Portion of a carcinomatous tumor from the breast.

1700 Mamma, affected with what Mr. Abernethy denominated "Tuberculated Sarcoma."

The patient, a woman, 40 years of age, unmarried. The disease in the breast had been increasing for nearly eighteen months, and for several months previous to her death her health became affected, and jaundice came on. There were small hard tumors in the skin in many parts of her body, particularly on the chest, and in both sides of the neck.

Both breasts were converted into various sized tumors, having all the characteristic signs of carcinoma. There was a considerable quantity of fluid in the abdomen. The liver was extremely large, very hard, and in color and appearance not unlike Castille soap, with yellow spots in it. The spleen was nearly double the usual size, although it was not diseased. There were a great number of tumors in the omentum, composed of medullary and cancerous deposits, and there were tubercles in the lungs of a medullary kind, tinged with a melanoid secretion. The absorbent glands in the lumbar and pelvic regions were also solid.

The uterus was healthy, but the ovaria were greatly enlarged, and rendered scirrhus.

This case was published in the 9th volume of the

Royal Medico-Chirurgical Transactions, with some practical remarks.

- 1701 Two sections of a breast, affected with what has been denominated "Gelatiniform Cancer." This morbid change of structure is said to be composed of albumen. Its growth destroys the natural structure of the breast; but the question is, Whether it should be classed as a malignant disease?
- 1702 Genuine carcinoma in the mamma, with extensive cancerous ulceration of the integuments. The axillary glands were affected with the same disease. This is a remarkable specimen.
- 1703 Mamma, affected with carcinoma, and fungus hæmatodes.
- The integuments had sloughed, and there was frequent hemorrhage. At the request of the patient the part was extirpated. The wound could not be healed; there was a copious sanious discharge, and the patient's health became affected; the glands in the axilla were enlarged, and very painful. Œdema of the arm followed, and she was distressed with a cough and dyspnœa. She died three months after the operation. The lungs and liver contained a number of medullary tumors. The patient was 47 years of age.
- 1704 Section of a carcinomatous mamma, which had caused ulceration of the integuments; a fungus growth projected externally, which bled profusely. The axillary glands and lungs were affected with the same disease. From an old woman.
- 1705 A specimen, showing a scirrhus state of the breast. The disease had progressively made its way through the integuments, and formed a fungus.
- 1706 Section of a mamma affected with fungus hæmatodes. The tumor was of an immense size, presented a nodulated appearance, and felt elastic as is generally noticed in this dreadful disease. The integuments were of a purple color, the veins greatly enlarged, and the temperature of the skin much increased; at the centre of the tumor there was a considerable projection, and the integuments were so much attenuated, that there was every reason to believe that ulceration would soon take place.

The patient's health was greatly affected, and she seemed anxious to have the diseased part removed. At this time I was consulted, my opinion was that an operation should not be performed. The disease increased in size, the integuments sloughed extensively, and there was a sanious and ichorous discharge; her health gradually declined, and she died.

- 1707 A tumor of the carcinomatous kind, extirpated from the mamma of an unmarried woman, 40 years of age. The disease had been making progress for nearly twelve months, had occasioned great pain, and affected the patient's health so much as to induce her to request an operation. The wound healed in a tardy manner, although her health improved after the removal of the tumor. About twelve months after the operation a small tumor appeared near the cicatrix, also one in the axilla of the same side; they gradually increased, accompanied with pain, her health again became disordered, and the catamenia ceased. Tumors of the same description formed beneath the integuments, covering the other breast; also in the axilla.

The tumors enlarged, the integuments became of a purple color, and the capillary vessels were very numerous; sloughing commenced, accompanied with frequent hemorrhage. The edges of the wounds were hard and everted. In this wretched state she continued nearly nine months; fresh tumors making their appearance in various parts of the body; the lungs subsequently became affected, which terminated her miserable existence.

The tumors on the surface of the body were of the fungoid kind. There were several similar tubera in the anterior mediastinum, also in the lungs. The abdominal viscera healthy. This case, and many others which I shall have occasion to describe, prove the inefficacy of performing operations on local malignant diseases.

- 1708 Section of a scirrhus mamma, with fungus hæmatodes. The lungs were affected with the same disease.

- 1709 Mamma and axillary glands affected with fungus hæmatodes. Several other parts of the body were

- affected with medullary sarcoma. The history of this case was published in the Transactions of the Royal Medico-Chirurgical Society.
- 1710 Mamma affected with genuine carcinoma, the integuments and nipple shown, the latter *not* retracted. There were several small cancerous tubercles in the integuments covering the breast, some of them are preserved in the preparation.
- The disease in the breast was not of great magnitude, but its structure was extremely dense, and it appeared to be formed by an accumulation of different sized cancerous tubercles, connected by dense cellular tissue.
- One of the tumors in the disease was about an inch above the nipple, it appeared to be formed of medullary sarcoma.
- The patient died from the effects of medullary tubera in the lungs.
- 1711 Mamma, affected with carcinoma and medullary sarcoma, the nipple healthy.
- The liver of this patient was affected with medullary tumors.

HERNIÆ.

UMBILICAL, VENTRAL, INGUINAL, AND FEMORAL.

- 1712 An umbilical hernia, with a large quantity of omentum in the sac, and a portion of the transverse arch of the colon adhering to the omentum near the internal part of the ring.
- A woman, 67 years of age, had been subject to an exomphalus for many years. She had, at different times, employed several kinds of trusses, which had prevented the parts from protruding, but at last the hernia became so immensely large that the best constructed truss had no effect.
- The truss was discontinued, the consequence was a protrusion of the intestine and omentum, which could not be reduced. Incarceration came on, and

there was great difficulty in relieving the patient; this took place occasionally, but in the last attack the symptoms were more serious than in the former, and although the taxis was continued for a considerable length of time, and various other means were employed to reduce the hernia, all seemed ineffectual.

It was now considered right to propose an operation, although little hope could be entertained of its proving successful. Fortunately another attempt by the taxis was made, which was continued more than an hour, when to the surprise of all present, a loud explosion of air and a rumbling of the bowels were heard, the strangulated bowel receded into the abdomen, and the principal part of the omentum was afterwards reduced.

Means to prevent inflammation were employed boldly, but without effect; symptoms of peritonitis came on, and the integuments surrounding the umbilicus, and to a considerable extent beyond, became highly inflamed, and appeared likely to sphacelate. By general and local bleedings, poulticing, keeping the bowels freely open, and low regimen, the dangerous symptoms were subdued, and although her bodily powers were greatly reduced, she recovered.

It is still more astonishing that although the patient was kept on her back in bed for nearly three months, the bowel during this period had not again protruded. Inflammation of the sac and omentum had taken place, lymph was effused, which had become organised, and a spontaneous cure of the hernia was effected.

The patient continued to enjoy good health for nearly three years, with the exception of an occasional attack of asthma, to which she had been long subject. This disorder occasioned her death.

On opening the abdomen, it was found that the omentum, which had passed through the abdominal ring, had become firmly united to it, and had obliterated the aperture.

The transverse arch of the colon adhered to the anterior surface of the bag of the peritoneum, and the serous surface of the rest of the intestines was agglutinated. The abdominal viscera were natural.

The lungs in several parts were hepatised, and the air-cells greatly enlarged. The heart normal.

The hernial sac presented a more healthy and natural appearance than I ever saw in such an old and large hernia.

The omentum was formed into a hardened mass, about the size of a cricket-ball.

- 1713 The umbilical ring dilated, and the appearance of a hernial sac, the effect of ascites; the operation of paracentesis was twice performed at this part, also an inch below the umbilicus.

The patient died from the effects of a diseased liver.

- 1714 Umbilicus, with a portion of omentum in the hernial sac, which had prevented the recurrence of hernia.

The patient, a very corpulent man, had all the symptoms of a strangulated omental hernia; with great difficulty the intestine was reduced, but a portion of omentum could not be returned. From wearing a well constructed truss, further protrusion of the bowel was prevented.

This patient died from cerebral disease, excited by arthritis, which is noticed in the history of morbid brains.

- 1715 A hernial sac of an exomphalus, with a portion of the integuments, abdominal parietes, and peritoneum.

This preparation shows the altered state of the internal surface of the hernial sac, also the extent of the incision (about an inch) which was made to reduce the rupture.

The patient was a woman, 50 years of age, the hernia had existed for several years, and she had never experienced any difficulty in reducing it until it was strangulated. The hernia had been strangulated for several hours before advice was requested.

The contents of the hernial sac were, a considerable portion of the transverse arch of the colon, with a large quantity of omentum, which adhered firmly to the hernial sac, near the ring. The adhesions were carefully separated, and the protruding parts were returned into the abdomen.

The intestine was very dark-colored, and some parts highly inflamed, which may be attributed to the smallness of the umbilical aperture, and the length of time the parts had been incarcerated.

Symptoms of enteritis and peritonitis were very evident the day after the operation, which could not be subdued by the most active treatment ; the abdomen became greatly distended, and she experienced agonising pain, accompanied with bilious vomiting and singultus ; she sank gradually, and expired on the fourth day after the operation.

The whole of the peritoneum was greatly inflamed, as were all its reflections ; the transverse arch of the colon, which had been strangulated, was in a sphacelated state.

The internal surface of the hernial sac is greatly thickened.

1716 An umbilical hernia, a portion of omentum in the hernial sac.

From a man 57 years of age, remarkably corpulent. The hernia became strangulated, and with great difficulty the intestine was reduced with a considerable quantity of omentum, but a part of the latter adhered so firmly to the hernial sac, as to prevent its return into the abdomen. After this he was able to wear a truss, which prevented the parts from again protruding ; he was very plethoric, and had been for several months troubled with an ulcer on one of his legs. He was suddenly seized with hæmatemesis, and vomited nearly two small wash-hand basins full of blood of a very black color.

As he did not appear much exhausted by the hæmorrhage, and his pulse was full and hard ; sixteen ounces of blood were taken from the arm, which soon evinced an inflamed appearance. About twenty-four hours from the attack of hæmatemesis, another attack more violent came on, accompanied with profuse intestinal hæmorrhage, which caused immediate death.

The adipose substance of the abdomen was nearly three inches in thickness ; there were scarcely any appearances of recent inflammation in any part of the peritoneum ; and there were nearly two gallons of water in the abdomen.

The omentum was loaded with fat, and the appendices epiploicæ of the colon and rectum were more conspicuous than I ever recollect seeing them. The liver was affected with what is denominated cirrhosis,

it was extremely small, the edges obtuse. Adhesions of long standing were observed between the serous covering of the convex surface of the liver, and that of the peritoneum reflected on the under surface of the diaphragm. The gall-bladder was thickly covered with fat, it was very small, and contained only a small quantity of orange-colored fluid. The spleen was quite flat, of considerable extent, and free from blood. The pancreas healthy. The mucous coat of the stomach and intestines was of a blackish color, occasioned by venous congestion, and there was a considerable quantity of blood in the stomach and intestines. The kidneys were granulated.

The heart, considering the size of the body, was extremely small, its muscular fibres soft, but very red, and the lining of the auricles and ventricles of a very bright red color, as were the coats of the pulmonary artery, the aorta, and all their main branches. These I consider to be signs of arteritis.

Some Pathologists have imagined that the discoloration of the tunics of the blood-vessels was produced by the blood in them after death; this idea must be incorrect, for in this case all the blood-vessels were nearly empty, which confirms an opinion I have long entertained from observation, that arteritis is the principal cause of most of the morbid actions to which the body is liable. The following were the appearances of the parts belonging to the hernia.

The hernial sac contains a portion of omentum, firm adhesion had taken place between the sac and the omentum, which had completely closed the external umbilical aperture; the other part of the omentum, which was connected with that in the sac of the hernia, had united to the peritoneum at the internal opening, had prevented the recurrence of further protrusion. The arteries of the omentum were extremely large, they are filled with wax injection, and are shown in the preparation; the adipose substance is likewise seen, which is of immense thickness.

I believe the dropsical effusion in the abdomen to have been occasioned by venous plethora, produced by

the want of the proper circulation of the blood in the liver ; this had excited inflammation of the arteries, and the same operated in determining the superabundant blood to the mucous surfaces from whence it was poured out into the cavity of the stomach and intestines, and caused the death of the patient. In a practical point of view the dissection of this hernia is highly important, and it shows the necessity of securing all the arteries that are divided in removing a large portion of omentum which cannot be returned into the abdomen ; for some of the arteries in this case were nearly as large as the carotid.

In a case of strangulated omental hernia on which I operated, where the transverse arch of the colon was strangulated, it was necessary to remove some of the protruded omentum, which weighed sixteen ounces. Five arteries of considerable size were secured, the ligatures were cut off close to where they were tied, and the remaining portion of the omentum was returned into the abdomen ; the patient recovered.

1717 An exomphalus, with ulceration of the colon.

From a woman, 48 years of age, extremely corpulent, she had been subject to an umbilical hernia ever since the birth of her last child ; this took place about two years previous to her death.

Although the hernial contents occasionally protruded to a considerable distance, she had not sought the advice of a Surgeon, nor had she worn a truss.

The patient, from mistaken modesty, had never consulted any professional person during the time she had been afflicted with this disease. At last the hernia became greatly increased in size, and she was attacked with violent sickness, but the bowels were not constipated. These symptoms continued to increase for nearly four days, and at last became so alarming, that she consented to have the advice of a Surgeon. The integuments covering the hernia were highly inflamed, and partly sphacelated, and the tumor was extremely tense.

As the patient had evacuations from the bowels, and the state of the hernial parts were not favorable for an operation, it was not proposed.

Poultices were ordered to be applied frequently, and as the pulse was very full and hard, she was bled freely, such medicines prescribed as were likely to relieve the distressing pain and sickness, and the bowels were strictly attended to. About twenty-four hours from the time of seeing the patient, the integuments covering the hernia sloughed to a considerable extent, and there was a small opening in the sac and intestine, from which fæculent matter was discharged, this was generally prevented when the body was kept in a horizontal position. After this the symptoms of enteritis gradually subsided, the bowels performed their functions correctly, but there was occasionally an oozing of fæces through the aperture for nearly three weeks.

Granulations formed, cicatrisation took place, and in the course of a few weeks the whole was perfectly healed, and the patient recovered her former state of health, which had not for a length of time been very good. She had been afflicted with an hepatic disease for several years, and had voided several gall-stones.

Nine months after the attack, which was occasioned by the hernia, symptoms of ascites came on, succeeded by jaundice, and ultimately hydrothorax, which caused her death.

There was a considerable quantity of water in the abdomen, the liver was extremely large, very yellow, and granulated; the veins were gorged with blood, as were all the veins belonging to the chylopoietic viscera.

The gall-bladder was filled with various calculi, the spleen nearly double the natural size. There was a great quantity of water in both sides of the thorax, the lungs were œdematous, and the bronchial tubes were loaded with mucus.

The pericardium contained about four ounces of water, the aortic valves were slightly ossified, all the other parts of the heart were healthy.

The following are the appearances of the parts concerned in the hernia.

The hernial sac contains a large piece of omentum, which adheres very firmly; a portion of the transverse arch of the colon, is united to the internal

ring, and there is an ulcerated opening in this portion of the intestine, of about the circle of a four-penny piece. This is the part that had sloughed, and adhesion had been effected between this aperture and the omentum, which prevented the fæculent matter from passing through it. As only one part of the bowel had been strangulated, and the sloughing of it, and of a part of the hernial sac had taken place, without the extension of the inflammatory action to the rest of this intestine, the stricture was relieved, and the ring being nearly closed, the intestine was prevented from again protruding into the sac. This is another proof of the possibility of spontaneous cure of a hernia, and I have seen similar events in inguinal hernia.

1718 A ventral hernia.

It was situated about two inches above the umbilicus, and very singular to remark, the ligamentum rotundum hepatis, and a portion of the ligamentum suspensorium protruded a little beyond the neck of the hernial sac ; these are seen in the preparation.

The sac is small, but very perfect, it contains a portion of omentum, which adheres in one point.

A part of the liver is preserved in the preparation, to show these facts, and the relative situation. The integuments covering the hernia are also seen, to prove that this was not an umbilical hernia.

The patient, a man 60 years of age, died of ascites, occasioned by a diseased liver. The hernia contained a portion of intestine, as well as omentum, it had never given the patient any uneasiness, and it was easily reduced ; he never used a truss.

The mental powers of this man were so very defective that he could not state how long the hernia had existed. I think that this was a congenital ventral rupture.

1719 A ventral hernia ; a small portion of the bowel protruded.

1720 A congenital scrotal hernia. From a man 54 years of age, the rupture had never produced any unfavorable symptoms ; he died of phthisis pulmonalis. The hernia was on the left side, a portion of the intestinum ileum was found in the sac, but there were no adhesions between the serous coat of the intes-

tine and the internal surface of the hernial sac. The tunica vaginalis is very thick, the sac not large, its inferior part adheres firmly to the superior portion of the tunica albuginea. Firm union was effected between the tunica albuginea and vaginalis, and careful dissection was required to separate them. These conditions are seen in the preparation.

There was also an old stricture in the urethra, and the bladder was diseased; the prostate gland and the vesiculæ seminales were nearly destroyed. These have been described in the history of morbid bladders, &c.

- 1721 An inguinal hernia, relative situation of the parts shown, also the spermatic cord, testis, and tunics. The epigastric artery is seen along the inner edge of the neck of the hernial sac.

The hernia had only protruded a little way through the external ring, but it occasioned all the symptoms of a strangulated hernia, which was easily reduced. And by the employment afterwards of a well-constructed truss, future protrusion of the bowel was prevented. He died several years from the time of the reduction of the hernia, of phthisis pulmonalis.

- 1722 An inguinal hernia, showing all the parts belonging to this species of rupture; the spermatic cord, the testis and its tunics are also preserved in the preparation. The intestine was strangulated, it was found in a sphacelated state; an operation had not been performed. The internal surface of the hernial sac is thickly coated with coagulated lymph, and all the other investments of the hernia are thickened.

- 1723 A large scrotal hernia on the left side (a dry preparation). The external and internal rings are approximated closely, in consequence of a large mass of omentum, and a considerable portion of the ileum having passed through them into the hernial sac; the aperture was very capacious, and the protruded parts were easily drawn out, adhesions not having formed. The patient had never worn a truss, nor had he, at any time, suffered symptoms of strangulated hernia.

The parts were carefully dissected, dried, and varnished. The muscles fasciæ, and all the different coverings of the hernia are shown, also the spermatic cord, the cremaster muscle, testis, and its tunics. The external iliac artery and the epigastric were filled with wax injection.

- 1724 A scrotal hernia. There was a large quantity of omentum, also a considerable portion of the transverse arch of the colon in the hernial sac.

The opening of the sac is extremely large, in consequence of the external and internal rings having been dilated into one aperture by the protruding contents of the sac. The fibres of the cremaster muscle are greatly developed, a fact generally noticed in dissecting a hernia of this kind. The most singular appearance in this preparation is the formation of a very firm adhesion at about the middle part of the hernial sac, by the omentum, which divides the sac into two portions, like a double hernia. The inferior part of the constricted omentum is about the magnitude and figure of a large testicle, and it is situated about two inches from the real testis, as seen in the preparation. The man had never worn a truss, although he had been afflicted with a rupture for several years.

If an operation had been necessary, the surgeon, after dividing the superior portion of the adhering omentum, would probably have been disconcerted on discovering the enlargement at the inferior part, near the testicle.

I amputated the leg of this patient ; the case has been given in the history of No. 457, which is the stump.

- 1725 A large scrotal hernia.

The hernial sac is inverted, to show how little its natural structure is altered by having been for many years protruded and stretched. There are several bands or adhesions, which had united various parts of the intestine in the sac. The hernia had been irreducible for four years, during which time the patient had not been able to wear a truss. The internal and external rings were in one, so that the intestine protruded directly.

1726 A large scrotal hernia. The patient had never worn a truss ; the penis is also shown in the preparation, and all the parts concerning this rupture are exhibited. In this instance the obturator artery arises from the external iliac with the epigastric, which I have frequently seen.

1727 A large scrotal hernia, with a considerable quantity of omentum, which adheres very firmly to the internal surface of the sac, the opening is very capacious. The spermatic cord and the testis are seen in the preparation. In consequence of a diseased prostate gland, the tunics of the testicle became greatly inflamed, pus was secreted between them, and the tunica vaginalis ulcerated to a considerable extent ; the cellular tissue between the external surface of the tunica vaginalis and the internal part of the integuments of the scrotum sphacelated, and exposed the testicle. The remaining portion of the vaginal coat was thickly covered with coagulated lymph, but the tunica albuginea was not affected, the testicle was healthy.

The particulars of this case have been given in the description of No. 1390, which is a preparation of the kidneys, bladder, and prostate gland from the same subject.

1728 A direct hernia, or ventro-inguiual hernia, and a small inguiual hernia, on the right side.

The ventro-inguiual hernia is large, it possesses all the coverings of an inguiual hernia, with the exception of the cremaster muscle.

The sac of the inguiual hernia is small, but the opening rather large ; the epigastric artery and the obturator are given off by the external iliac. If there had been strangulation of the direct hernia, and the structure had been divided upwards and outwards, the epigastric artery would inevitably have been wounded, and there would have been considerable risk of doing this had the division been performed directly upwards, but no danger in cutting obliquely upwards and inwards. If the inguiual hernia had required an operation, the stricture might have been relieved without any chance of touching this artery, by cutting *directly* upwards. This species of rupture, ventro-inguiual, is not of frequent occurrence,

but there being in this instance an inguinal hernia on the same side, makes the preparation more valuable. The patient was a man, 20 years of age, who had never experienced any inconvenience from the herniæ, and had not used a truss. He died from the effects of a diseased heart and liver.

1729 A portion of intestinum ileum, exhibiting the effects of a strangulated femoral hernia in a woman. An operation had been performed.

Only a small knuckle-like portion of the intestine was incarcerated in the hernial sac. The coats of the intestine were highly inflamed, yet not sphacelated, but this would soon have taken place had not the operation been performed. The nature of the disease was not discovered so early as could have been wished, which in all probability was the cause of the want of success in the operation. The peritoneum and all its reflections were highly inflamed.

1730 A portion of intestinum ileum, inflamed, and lymph deposited on the serous surface, the effects of a strangulated inguinal hernia.

A man, 60 years of age, had long been afflicted with asthma, and a diseased liver; ascites came on, accompanied with icterus, and about two months prior to his death his breathing was performed with such distressing difficulty, that it was considered right to perform paracentesis.

This afforded great relief, but effusion into the abdomen again took place, and four days previous to his dissolution symptoms of peritonitis came on, followed by vomiting, and his bowels could not be acted on. There was a considerable quantity of water in the abdomen; the peritoneum and all its reflections were highly inflamed, and most of the small intestines were agglutinated by recently effused lymph.

On the right side there was an inguinal hernia; a portion of ileum was seen in the hernial sac, which was only slightly constricted, and was easily drawn out; the peritoneal coat was not more inflamed than that belonging to the rest of the small intestines, and the mucous coat was not affected.

The liver was large, hard, and granulated; the gall-bladder distended with viscid bile; the spleen large, its structure dense.

In both sides of the thorax there was a considerable quantity of water, the lungs were partly cedematous, and emphysematous.

In the pericardium there were four ounces of water ; the heart was very large, particularly the left ventricle, its parietes thick, cavity capacious, and the base of the aortic valves thickened.

The patient had never mentioned to the professional gentleman who attended him his having had a hernia ; probably it had been occasioned partly by the accumulation of fluid in the abdomen, and the violent efforts of coughing ? If the rupture had been detected, it might have been easily reduced, but this would not have saved the man's life.

1731 Femoral hernia.

A woman, 60 years of age, was seized with symptoms of strangulated femoral hernia ; means were employed for its reduction, which failed ; an operation was repeatedly proposed, which was obstinately refused. Vomiting and singultus became more distressing, tension of the abdomen came on, and she died on the third day from the first symptoms of strangulation. The peritoneal coat of the small intestines was highly inflamed, and there was a considerable quantity of dirty looking fluid in the abdomen. The inferior portion of the ileum was strangulated, mortification had taken place in the bowel at the neck of the sac, and it had burst, which accounted for the fluid in the cavity of the abdomen. Lymph was deposited on the mucous surface of the strictured intestine, which adhered firmly, as is seen in the preparation.

If the poor woman had submitted to the operation when it was first proposed, I have no doubt her life would have been saved.

1732 A portion of the intestinum ileum, the coats inflamed, the effects of a portion of this bowel having been incarcerated ; at about six inches beyond this part there is a round opening through all the coats. The appearances are well preserved in the preparation. From a woman, 45 years of age, who for several years had a femoral hernia on the right side, and had worn a truss. Symptoms of strangulated hernia suddenly came on, the surgeon who saw the

patient imagined he had reduced the hernia, applied the truss, and ordered aperient medicine and clysters to be administered, the latter seemed to relieve the bowels, but the vomiting continued, and it was surprising the quantity that she ejected. She complained of violent pain in the abdomen, which became greatly distended, singultus came on, accompanied with stercoraceous vomiting, and the bowels could not be acted on. At this time I was requested to visit the patient, I thought it right to propose an operation, but from the length of time the bowel had been strangulated, I doubted whether it would prove successful.

A small portion of intestine was strangulated; the coats appeared of a dark red color, but not sphacelated; after dividing the stricture the bowel was easily reduced. The sickness continued, and she complained of great pain in the abdomen, which was distended with fluid and air; she was extremely restless and anxious. The bowels after the operation were slightly relieved; she died on the fourth day from the time it was performed.

On opening the abdomen, an immense quantity of fluid, like gruel, with fæculent matter and air, escaped. The peritoneum and its reflections were greatly inflamed, the intestines nearly empty. On carefully examining the bowels, an aperture was found in the ileum, about six inches from that portion of it which had been constricted; this accounted for the escape of the contents of the bowels into the cavity of the abdomen.

The opening in the intestine does not show any signs of a morbid state of the coats previous to the bowel being strangulated, as all the coats, with the exception of the inflammation caused by the hernia, appeared perfectly healthy.

In consequence of the preparation having been preserved in alcohol, to show the inflammatory appearances, the coats are corrugated, but on examining them when recent, they appeared to have been greatly dilated and attenuated by the pressure of their contents. I have stated that there was a fluid like gruel mixed with the fæculent matter in the cavity of the abdomen; it may be well to mention

that the patient drank large quantities of gruel and water.

I believe the effusion into the abdomen had taken place prior to the operation; if it had been performed sooner, the life of the patient might have been saved.

This is the most singular case I ever met with.

1733 A strangulated hernia in the omentum.

A portion of the intestinum ileum, about two inches before it terminates in the cæcum, had passed through a part of the layers of the omentum, in a knuckle-like or angular figure, as is noticed in femoral and inguinal hernia. The intestine was incarcerated by a ligature formed by an artery and vein belonging to the omentum. I have seen strangulated hernia produced by the intestine passing through the mesentery. The incarcerated bowel was greatly discolored, and there were evident signs of inflammation of the serous coat of the ileum, beyond the strictured part; when water was injected into the bowel, it did not pass beyond the strictured portion of the tube.

A man, 50 years of age, had experienced for several days pain in the intestines, accompanied with severe sickness, and considerable difficulty in passing fæces, although he had by his own accord taken very active purgatives. The symptoms becoming more distressing, induced him to apply for professional aid, every endeavour was employed to procure evacuations from the bowels, but without effect. The sickness increased in violence, accompanied with singultus and tenesmus, and he complained of great pain in the situation of the cæcum, also of tenderness when pressure was made on the abdomen. All these symptoms denoted some impediment to the due performance of the function of the bowels, but it seemed impossible to decide whether the cause was produced by what is denominated internal hernia, intro-susception, or by a stricture.

The patient lived three days from the commencement of the attack. If the strangulation of bowel within the cavity of the abdomen could have been, by the symptoms, satisfactorily detected, Would it be considered prudent in similar cases to perform an operation?

TUMOURS,

ENCYSTED, SIMPLE, AND MALIGNANT.

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- 1734 Encysted tumors removed from the scalp, the cysts are dense in structure.
- 1735 Two encysted tumors, which were removed from the scalp; structure cartilaginous; they contained in delicate cysts. A similar tumor was removed from the same patient, only of a much larger size from the integuments of the fore-arm.
- 1736 A cyst, inverted; it contained a great quantity of hair, mixed with a sebaceous secretion. The internal surface was lined with a structure resembling skin, and it was thickly beset with short light-colored hairs. This tumor was removed from the fore-arm of a man, who had very light-colored hair.
- 1737 An encysted tumor of considerable size, which was removed from beneath the integuments of the shoulder of an ox. The contents were an abundance of very delicate long black hairs, mixed with an unctuous secretion. The internal surface of the cyst was of a blackish color, resembling the skin of the animal, which was black. I could not discover any bulbs to the hairs.
- 1738 A portion of the integuments of a sheep, with an encysted tumor, containing wool.
- The three last preparations have been noticed in Mr. LAWRENCE'S Lectures on Tumors.
- 1739 Part of a vascular cyst, belonging to a large tumor. The tumor was situated between the scapulæ, it had not occasioned much pain during its growth, but as it increased rapidly, and its bulk produced a very unsightly appearance, the patient became very anxious to have it removed.

From a woman, 24 years of age, the disease had been making progress for nearly two years.

Several modes of treatment had been adopted to endeavour to disperse it, but without effect.

Two able Surgeons were consulted, and they imagined

the tumor to be adipose sarcoma, and advised its removal; I performed the operation.

The tumor being so very large, it was found necessary to make an incision ten inches in length through the integuments, and in consequence of very firm adhesion existing between the external surface of the sac, and the surrounding cellular tissue, the operation was rendered very difficult and painful, and a number of arteries required to be tied. The integuments were brought together with sutures and adhesive plaster; the wound healed by the first intention, and the patient soon recovered.

On opening the cyst, it was found filled with an aqueous fluid mixed with pus, and large flakes of coagulated lymph; its internal surface was highly vascular, like a secreting membrane, and there were a great number of processes of organised lymph, projecting from its surface. This is a proof of the great difficulty of giving a correct diagnosis in some local tumors which I shall have occasion to notice when I describe some of the malignant kind.

I am inclined to think that this enlargement was produced by a serous cyst, and not by an hydatid.

- 1740 A melicers encysted tumor, which was extirpated from the thigh.
- 1741 A lobulated encysted tumor, which was extirpated from the internal surface of the under eye-lid. These tumors are occasionally seen in various parts of the body, but oftener about the face; the structure of the tumor was dense, its external appearance not unlike a large wart. I do not think it a malignant production.
- 1742 An adipose tumor (lobulated), which was situated beneath the integuments of the shoulder; it was extirpated.
- 1743 An adipose tumor (lobulated), which was extirpated from beneath the integuments of the abdomen.
- 1744 An adipose tumor, with the integuments, which was removed from between the shoulders.
- 1745 An adipose tumor.
- 1746 An adipose tumor, about the size of a horse-chesnut, which was extirpated from the temporal fascia. The tumor possessed a dense cyst, and firm adhesions had formed between it and the cellular tissue

belonging to the fascia, which made it difficult to detach it, and this could not be effected without dividing the temporal artery, which was very large. The tumor had been growing for nearly three years.

- 1747 One of the fibrous tumors of BAILLIE, which was discharged from the uterus of a woman about 50 years of age, who had suffered severely from violent uterine pains, accompanied with profuse leucorrhœal discharge and occasional hæmorrhage, although she had ceased to menstruate.

The tumor, in passing from the uterus, produced great constitutional disorder, and the discharge from the uterus and vagina was profuse and very fœtid. The patient recovered.

The case was supposed to be carcinoma uteri. The natural structure of this growth was so much altered in color, and presented externally such a sloughy appearance, that it was very difficult to make out its character.

- 1748 An osseous tumor of considerable size, attached to the second toe, which had its origin from the theca of the flexor tendon. It had been nearly four years in forming, but had only given the man pain during the last twelve months. The integuments covering the growth ulcerated, and there was a copious discharge of pus mixed with blood, which affected his health, and made him anxious to have the toe removed.

A section of the osseous growth shows its solidity.

- 1749 A small pendulous tumor, which had its origin from a part of the omentum of a man.

The tumor probably had been formed in the manner described by JOHN HUNTER, by a small quantity of blood having been shed, which had become organised.

- 1750 Section of the foot of a Nobleman, 35 years of age, with a portion of a large tumor situated in the sole; the leg was amputated, and the arteries injected with size and vermillion. The other portion of the section is in the Museum of St. Bartholomew's Hospital. The integuments covering the foot were colored with the injection, but the substance of the tumor did not show the

least appearance of vascularity; its structure resembled the white fibrous tumors which are frequently seen in the uterus, and it was covered with a very dense cyst.

The plantar fascia was greatly thickened, and expanded by the growth of the tumor.

On dissecting the parts, the growth seemed to have its origin from the periosteal covering of the metatarsal and tarsal bones, and it had extended backwards as far as the inferior portion of the os calcis, but was not connected with the periosteal covering of this bone; if it had, the consequence would have been an obliteration of the plantar artery and vein, and consequent gangrene of the foot. Moreover the plantar nerve would have been compressed, which might have caused *tic douloureux*.

At the age of five years an enlargement was observed on the inner surface of the sole of the foot. Mr. JOHN HUNTER and Mr. POTT were consulted, and every attempt was made for a considerable time to disperse the swelling, but without effect. The removal of the limb was proposed, but the parents would not give their consent. The tumor increased slowly, but never produced pain; it ultimately acquired an enormous size, and became so unwieldy and occasioned such distressing pain, as to induce him to have the leg amputated.

There was considerable hæmorrhage after the operation; the stump did not unite by the first intention, sympathetic fever supervened, but the patient recovered.

I never saw a tumor of this character in such a situation.

- 1751 A small tumor, removed from the mamma of a woman, in structure it is not unlike what Mr. ABERNETHY has denominated "*Tuberculated Sarcoma*."
- 1752 A carcinomatous tumor, from the mamma; the lungs and bronchial glands were affected with fungus hæmatodes.
- 1753 A portion of the upper lip of a man affected with carcinoma, which I extirpated, and the patient recovered.

The disease had progressively increased for nearly two years, but his health was not affected. The external

part of the morbid growth resembled Chimney Sweeper's cancer, and I have seen the same verrucal appearance in the integuments covering the tibia.

1754 A scirrhus tumor, which was extirpated from the pinna of the ear of an old woman. The disease did not recur.

1755 A section of the left half of the face, &c. of a woman, showing a carcinomatous tumor in the antrum High-morianum, which had caused absorption of the bony parietes of this cavity, also of the bones of the inferior part of the orbit and palatine arch, so as to allow the morbid growth to extend into the cheek, orbit, nose, and mouth. From a patient, 55 years of age, who had enjoyed good health for many years previous to the commencement of the disease.

The tumor felt very firm, and it was immovable; little attention was paid to it till pain was felt in the swelling, which affected her eye. In the course of six months the tumor increased, it occasioned great pain, and it felt so dense that it was suspected to be an osseous growth in the antrum. Various modes of treatment, locally and generally, had been employed to mitigate the poor creature's sufferings, but without effect. The integuments of the cheek presented a purplish color, and the capillary vessels were very numerous and tortuous. The eye became more painful, and the nasal duct was obliterated. The conjunctiva was not inflamed, but the pupil of the eye became gradually dilated, and the retina ultimately amaurotic; the muscles belonging to the eye ceased to perform their function. After this the eye began to protrude from its orbit, the integuments of the cheeks sphacelated, and there was considerable hæmorrhage; the brain became affected, and she died. The arachnoid membrane lining the dura mater, also that covering the pia mater, was highly thickened, particularly on the under surface of the anterior lobe of the cerebrum. The pia mater was greatly inflamed, and pus had been secreted between this membrane and the tunica arachnoidea on the left hemisphere of the brain. The substance of the brain was inflamed, and the ventricles contained three ounces of water. The dura mater covering the left orbital

plate, and that portion belonging to the bones forming the fossa for the middle lobe of the brain, were greatly thickened. On detaching them they were found separated from the bones, in consequence of their having become diseased by the malignant growth in the antrum and orbit, and pus was found between them.

The eye and all the muscles, &c. were completely fixed by the insinuation of morbid matter into the cellular tissue belonging to them, which is shown in the preparation. The left optic nerve was very small and dark colored.

- 1756 A cancerous tumor, removed from the integuments belonging to the tibia. Its external appearance resembled Chimney Sweeper's cancer. I have seen the same disease on the lip, face, nympha, &c.

From a man, 50 years of age; some time after the operation, the glands in the groin became affected with the same disease; it also affected the liver, which caused the death of the patient.

- 1757 A portion of diaphragm, affected with carcinomatous tumors of various sizes, beneath the thoracic and abdominal coverings.

From a man 73 years of age, there were cancerous tubera in his liver and lungs.

- 1758 A tumor of the fungoid and carcinomatous character, it had its origin in the integuments covering the malar bone on the left side.

The tumor had been growing gradually for nearly nine months; the patient's health became affected, and his complexion was sallow. The integuments covering the growth, and to some distance beyond, were inflamed and painful, ulceration commenced near the centre of the tumor, which was followed by considerable hæmorrhage, that could not be suppressed by the application of cold, turpentine, or pressure. As the loss of blood seemed to have lessened his bodily power, and the hæmorrhage could not be checked, I thought it expedient to extirpate the tumor; it was necessary to tie three arteries. About a fortnight after the operation his digestive organs became disordered, afterwards febrile symptoms commenced, succeeded by erysipelas, the patient became furiously delirious, and he died.

Being an Irishman, permission could not be obtained to inspect the body.

Dissection of the tumor.—Its base was carcinomatous, the rest of the structure fungoid. If the body had been examined, I have no doubt that the lungs and liver would have been found affected with the same disease.

1759 Section of a thigh-bone, from a woman.

Carcinomatous and fungoid growths had formed in the cancellous parts of the head of the bone, and trochanters, and down nearly one half of its shaft.

These productions had occasioned considerable expansion of the parietes; they were merely covered by what might be termed a thin shell of the natural bone, and a thickened periosteum.

At about five inches from the neck of the thigh-bone a spontaneous fracture had taken place, which is seen in the preparation.

This is a very valuable specimen.

1760 A tumor of the fungoid and carcinomatous kind, which had its origin from the pleura costalis at the posterior and superior part of the thorax on the left side. It was situated on the first four ribs near their articulation with the vertebræ, and had occasioned absorption of the periosteal covering; the bones were carious.

From a child, 7 months old, who had from birth shown symptoms denoting an enlarged liver, which increased to an enormous size.

About three months previous to the death of the child, ascites came on, accompanied with a distressing cough, and yet there was no emaciation.

There was a large accumulation of fluid in the abdomen, the liver occupied nearly the whole cavity, it was very firm in texture, and contained a great number of medullary and carcinomatous tubercles, some were distinct, others aggregated. The gall-bladder contained only a small quantity of pale-colored secretion; the spleen was large, but not diseased. All the other abdominal viscera were healthy. The lungs were loaded with blood and sero-purulent infiltration, and in some portions were hepatised, but there were neither scrofulous nor fungoid tubercles

in them. The pleura costalis on the right side was highly inflamed. See Section on Diseased Livers. This I consider a congenital disease—the father was very unhealthy.

- 1761 Section of the base of the tongue of an ox. Its external surface presents the appearance of a cauliflower, or Chimney Sweeper's cancer. The tumor was injected with size and vermillion, which beautifully shows the high state of vascularity. A section of the growth presents a fibrous structure mixed with medullary tubercles. There were also medullary tumors in the lungs and liver; the other portion of the disease is in the Museum of St. Bartholomew's.
- 1762 Fungoid tumors on the cellular tissue, belonging to a part of the *Musculus Rectus Femoris*. The lungs and intestines were affected with the same disease. The history of this case is related in the 8th Volume of the Transactions of the Royal Medico-Chirurgical Society.
- 1763 A fungoid tumor, removed from the posterior part of the thigh of a man. He went into the country after the wound healed, and as nothing has been heard of the patient since, it is not known whether the disease had appeared in any other part of his body since the operation was performed.
- 1764 Fungoid tumors in the *glutæus maximus*. There were medullary tumors in the liver, and in the mesenteric glands.
- 1765 A fungoid tumor, which had its origin from beneath the fascia of the thigh, on the anterior surface, near the capsule of the knee-joint. It was extirpated. A section of the tumor showed that it was formed of medullary and fungoid matter, and its centre presented all the morbid appearances of genuine carcinoma in a mamma; these are seen in the preparation.
- From a man 47 years of age; the disease had been gradually increasing for three years; he had consulted several able surgeons, but they all differed in opinion respecting the nature of the disease. About six months previous to the death of the patient, the tumor began to increase, it became painful, and

presented a nodulated appearance; the integuments were of a purple color, the cutaneous veins very large, and the patient's health affected.

The central part of the tumor became conical, and the integuments were very thin, which induced a surgeon, not well acquainted with the nature of the disease, to puncture the tumor. Nothing but blood flowed from the aperture; after this a fungus growth appeared, which increased daily, and bled profusely, and endangered the life of the patient; it was considered right to extirpate the tumor. Every thing went on favorably after the operation for some time, but cicatrisation did not proceed naturally; the surface occasionally bled, the granulations were large and flabby. His health became affected, and the discharges from the bowels were very foetid, and of a black color, as in mælena. Tumors began to show themselves in the wound made by the operation, they increased in size, and there was an ichorous offensive discharge from them; his health suffered, the surface of the wound sloughed, and the brain became affected, which caused death.

I fully expected to have found some of the viscera of the thorax or abdomen affected with the same disease, but to my astonishment there were no signs of malignant disease in any of the viscera. This is the only case I have met with where the disease was entirely local. The liver was large, granulated, and of a deep yellow color; the mucous coat of the intestines of a darkish color, and portions of the cæcum and colon ulcerated.

1766 Section of a fungoid tumor, minutely injected with size and vermillion.

The tumor was removed from the thigh.

1767 A beautiful fungoid tumor, which was situated on the external part of the leg a little below the knee-joint, in a line with the edge of the tibia. The leg was injected with size and vermillion.

From a man, 40 years of age, who had a similar tumor removed in the situation described, the cicatrix of which is seen in the preparation.

The wound did not heal completely, a fungus of the same character began to appear, which gradually

increased, and acquired the magnitude of a very large orange.

There was a copious discharge of blood and ichor from the diseased part, the external surface appeared likely to sphacelate, and the health of the patient was seriously affected. The removal of the first growth having terminated unfavorably, I did not think it prudent to repeat the operation. I informed the patient of the nature of the disease, and of the uncertainty of preventing it from attacking some other part of the body, even if the leg were amputated. This did not lessen his courage, he felt anxious to live, and particularly desirous to have the leg removed, I therefore gratified his request. The stump nearly healed by the first intention, and his health gradually improved; after this he went into the country, and although it is many years since the operation was performed, I have not learnt whether the disease had attacked any other part.

1768 An immense medullary and fungoid tumor, in the right arm of a boy, 7 years of age; the arteries injected with size and vermillion.

The tumor extended from a little above the wrist, nearly as far as the axilla.

At the age of two years, a small growth appeared beneath the integuments covering the radius and ulna on the outer surface of the arm, about two inches from the carpus.

The tumor increased, although means had been employed to disperse it, the tumor gradually acquired the size of a walnut. It felt elastic, and presented all the other signs of a malignant growth; it was extirpated, there was considerable hæmorrhage, which was probably caused by the interosseous artery being divided in the operation. About six months after the operation, the disease recurred in the same place, and continued to increase for eighteen months.

The tumor presented a nodulated appearance, it felt elastic, the integuments were of a deep red color, and the superficial veins were greatly enlarged and meandered over the tumor, as is generally noticed in fungus hæmatodes.

The axillary glands became immensely enlarged, and

the integuments of the arm were so much attenuated in some parts previous to death, that it was expected sphacelation would take place.

What appears to be very singular in this case is, that although the arm was so surprisingly enlarged, and the axillary glands, vessels, and nerves were so greatly compressed, the hand was not increased in size; this is shown in the preparation.

On making a section of the tumor, it was found to be composed of medullary and fungoid matter, mixed with a dense fibrous structure, but it was not much colored by the injection.

Scarcely any of the muscles, vessels, or nerves, could be traced in the fore-arm, from being so completely impacted in the morbid mass.

The axillary glands were converted into medullary and fungoid tumors of an immense magnitude.

See No. 1769, the diseased Axillary Glands.

On dissection, the disease seemed to have commenced on the interosseous ligament, as in a case which I had an opportunity of seeing in the arm of a man with the same kind of growth, it was extirpated, but the disease recurred, and the operation was repeated with the same want of success; a tumor of immense size formed. The arm was amputated, and the patient died shortly after the operation from the effects of phlebitis; what produced inflammation of the veins I could not ascertain.

In amputating an arm or leg affected with fungus hæmatodes, the veins are sometimes so much enlarged, and bleed so profusely, that it is necessary to tie them. In this case the disease had not affected any other part of the body.

The whole of the ulna was completely deprived of its periosteal covering, and the inferior extremity was enlarged to the extent of four inches, its surface was thickly covered with irregular osseous deposits and coagulated lymph, and at this part a spontaneous fracture had taken place, which is seen in the preparation; the bone is injected, but the remaining portion of the ulna appears to have lost its vitality. The radius was not affected. The axillary nerves are shown in the preparation, also a portion of the ulnar and median nerve.

- 1769 The diseased absorbent axillary glands from the patient above described, injected.
- 1770 Section of a fungoid and medullary tumor, with the axillary glands.
 From a young man, 19 years of age ; the tumor was situated in the arm, it had acquired an immense size, and affected the axillary glands ; the integuments covering the scapula sloughed, and exposed a portion of the bone, and the growth of the tumor had produced a spontaneous fracture of the centre of the os brachii.
 The lungs were filled with medullary sarcoma. See the cast of the arm.
- 1771 Inguinal glands converted into large fungoid tumors ; and in the same bottle there is a large fungoid tumor, which was situated on the back.
 The brain of this patient was affected with fungus hæmatodes, and the longitudinal sinus was filled with medullary matter.
 From a young subject.
- 1772 A fungoid tumor in the mesentery. The liver was affected with the same disease, and there were fungoid tubera in the glutæus maximus.
- 1773 Portions of two ribs, with large fungoid tumors in the cancelli near the cartilages, the periosteum and pleura costalis were greatly thickened ; these appearances are well preserved in the preparation.
 From a boy, 7 years of age ; the left eye was affected with fungus hæmatodes, as was the brain. The history of this case will be given in the Section on Diseased Eyes.
- 1774 A very large fungoid tumor, connected with carcinoma, which had its origin from the periosteum belonging to the os femoris at its posterior surface. From a patient, a man, 45 years of age. He had received a severe kick from a bullock on the posterior part of the thigh, which occasioned ecchymosis ; this was followed by inflammation and considerable tumefaction, which confined him in bed for several weeks. After this period he was able to walk, but a considerable enlargement of the thigh remained, which occasionally caused pain. The swelling gradually increased, and in the course of three years it had acquired a great magnitude,

and impeded his walking, he also complained of pain and numbness of the leg. The veins of the thigh and leg became greatly enlarged, and tortuous. At this time I was requested to see the patient. On examining the tumor carefully, I found it composed of several inequalities, it had an elastic feel, and presented all the signs of fungus hæmatodes.

Amputation was proposed, but the patient at this time would not give consent. The tumor increased, the integuments covering it became inflamed, and the tension was so great as to excite considerable pain. The surgeon who attended the patient thought there was an accumulation of fluid, an opening was made into the enlargement, and nearly two pints of venous-looking blood were discharged. There was an oozing of blood from the aperture for nearly a fortnight. The pain in the leg increased, and his health began to decline.

He now implored to have the limb amputated, although he had been informed of the nature of the disease, and the uncertainty of the success of an operation. There was no sign of disease in the inguinal glands, nor in any other part of his body, that could be discovered. I amputated the thigh high up, so as to give a better chance of the operation proving successful, and as a tourniquet could not be employed, pressure was made (by my friend Mr. Barlow, of Writtle) on the femoral artery, where it passed under Poupart's ligament, which answered extremely well.

The arteries of the leg were injected with size and vermillion. On reflecting the integuments and fasciæ from the diseased growth, it was seen that the tumor was contained in a dense cyst. The base and part of cyst adhered very firmly to the periosteal covering of the femur, near the inferior part of the linea aspera, where I believe the malignant disease had its origin, and had been excited by the injury the man received, having been constitutionally predisposed to the disease.

From this situation the tumor had made its way between the long head of the biceps femoris, the semitendinosus, and membranousus, and a portion of

the tumor had protruded outwardly, under the biceps and vastus externus muscles, so as to expand and elongate their muscular fibres considerably. The popliteal nerve and vessels were greatly compressed by the growth of the tumor, and the nerve was flattened considerably, which accounted for the pain the man had endured. A section of the tumor showed that it was principally formed of fungoid and medullary matter; at its base, where it was attached to the periosteum, there were several scirrhous tumors, and one of these tumors was seen on the external surface of the capsule, which is shown in the preparation. The internal surface of the cyst was extremely vascular. The thigh-bone was sawn through, there were no signs of disease in the internal part, but that portion of the bone covered by the periosteum, where it was in connection with the capsule of the tumor, had undergone great irritation, and osseous depositions had taken place as in exostosis. The stump healed favorably, which was more than I expected, considering the nature of the disease. He enjoyed good health for nearly three years, after this he was attacked with organic disease in the lungs; he became greatly emaciated, the glands in the groin became enlarged, and colliquative diarrhœa finished his existence.

Inspection. The absorbent glands in the pelvis and abdomen were affected with carcinoma. The liver contained medullary tubera, and there were carcinomatous tumors in the lungs; the mucous glands of the small intestines were enlarged, and the mucous coat was in parts ulcerated, particularly in the ileum. The mesenteric glands were likewise diseased.

The result of this case, and many others I shall have occasion to relate, demonstrate decidedly that operations do not prevent the recurrence of malignant disease, or its attack on some important viscus.

1775 A splendid specimen of fungus hæmatodes in the head of the tibia.

From a patient 20 years of age, who had complained of pain in the ham and knee for several months, which had not prevented his walking, yet he felt

considerable stiffness, and there was a little enlargement near the tibial portion of the knee-joint. The swelling gradually increased, and the part became painful; the swelling extended over the upper portions of the *tibialis anticus*, and of the *extensor longus digitorum pedis*.

A pulsation being felt in the tumor, which increased in strength, led to a suspicion that the anterior tibial artery was aneurismal.

A consultation was held, to ascertain the real nature of the disease, and if an aneurism, whether it would not be right to tie the femoral artery. But as it was not decided whether the disease was *fungus hæmatodes* or aneurism, the operation was not performed. The pulsation in the tumor suddenly ceased; after this the swelling increased greatly, there was considerable enlargement in the ham, and the *gastrocnemii* muscles and integuments were greatly stretched.

The tumor presented a formidable appearance, the cutaneous veins became enlarged, the integuments assumed a purplish color, and a sense of fluctuation was felt in the enlargement. A puncture was made into the tumor, nothing but blood escaped, a fungus shot out, the aperture enlarged, the growth increased, and there was considerable hemorrhage. As the health of the patient was daily declining, a consultation was held, and amputation was proposed, which was performed. Every thing appeared to be going on favorably till the 6th day after the operation, when profuse hemorrhage came on from the stump, and he died before any assistance could be obtained. It was found that the ligature had separated from the femoral artery, that there was no union of the artery, and it had ulcerated. I injected the leg with size and vermilion, and the following are the appearances which were noticed on dissection. The internal coat of the femoral artery on the face of the stump was inflamed, but there were no signs of lymph or a coagulum; the femoral vein contained a coagulum.

The head of the tibia and the upper part of the shaft of this bone had been expanded by the growth of

the fungoid matter, and the parietes of the bone were extremely thin (as seen in the preparation). A portion of the bone had been absorbed, which allowed the fungoid matter to protrude through the periosteum, and to appear externally.

The fungus had made its way between the tibialis anticus and the extensor longus digitorum, and had caused ulceration of the anterior tibial artery, where it passes through the interosseal ligament.

The ulcerated orifice had at last become completely pressed upon by the fungus and the coagulated blood, so as to prevent any further hemorrhage. The fungous substance had also made its way from the head and shaft of the tibia between the gastrocnemii muscles, and had displaced the posterior tibial artery, vein, and nerve, without producing any morbid change, except inflammation of their external surface. The fasciæ and cellular tissue connecting the muscles of the upper part of the leg were in a high state of inflammation, as were the thecæ of the tendons; and in many parts sloughing had commenced. The muscles, particularly the gastrocnemii, tibialis posticus and anticus, and the extensor longus digitorum were injected with blood, and presented a very unhealthy appearance; these changes are seen in the specimen.

The periosteal covering of the tibia, for some distance beyond the diseased parts, was excessively vascular, and much thickened, and irregular depositions of bony matter had taken place on the outer part of the bone, as in chronic inflammation of the bones. The knee-joint was perfectly healthy, excepting that there was slight inflammation of the synovial membrane, and the condyles and shaft of the femur were natural in structure. On examining the fungous matter in, and that protruding from, the internal part of the tibia, it was found extremely vascular, fibrous in texture, and mixed with coagulated blood, similar to that noticed in aneurisms undergoing spontaneous cure. A considerable portion of the injection had passed from the popliteal artery, and through the ulcerated opening in the anterior tibial artery, and was diffused in the morbid growth.

The absorbent glands in the course of the femoral artery were enlarged, from a deposition of fungoid matter, as were the inguinal, pelvic, and lumbar glands. The liver contained several fungoid tumors; all the other viscera were healthy.

The history of this interesting case has been partly described by Wm. Lawrence, Esq. in his invaluable Lectures in the *Lancet* on Fungus Hæmatodes.

1776 The head of a tibia, expanded to an enormous extent, by the growth of a medullary and fungoid tumor in the cancelli of the bone. The parietes of the bone were nearly absorbed, there was only a thin shell left, which was very soft, from the absorption of the phosphate of lime. From a man 60 years of age. The leg was amputated, the disease afterwards attacked other parts of the body, and he died.

1777 Section of a tumor. From a man, 37 years of age, who had been afflicted with a disease near the knee-joint for three years. He had been seen by several Surgeons, some imagined it to be a disease of the synovial membrane, others, scrofulous, &c.

The tumor in the ham was very large, and it had all the appearance of fungus hæmatodes. The leg was amputated. The main bulk of the tumor was situated in the ham, and it spread out laterally; after the skin, muscles, &c. were dissected off, the external surface of the enlargement had a nodulated appearance, it felt soft and elastic.

On making a section of the joint, it was seen that the capsule was immensely distended with fungoid and medullary matter, that the cartilaginous covering of the head of the femur, and part of the osseous substance had been absorbed; the medullary part of the shaft of this bone was filled with fungoid matter, and a spontaneous fracture had taken place; this is seen in the preparation.

The capsule of the joint was greatly thickened, and its internal surface was covered with organised lymph. The stump did not heal well, his health became affected, carcinomatous tubercles of various sizes appeared in the skin in several parts of his body, and previous to death the lungs became diseased. The disease seemed to have commenced in the femur.

I have often seen a fractured state of the bone where fungus hæmatodes or carcinoma had formed in the internal part of cylindrical bones.

- 1778 A knee-joint of a young woman, affected with medullary sarcoma.

An enlargement commenced in the ham, and increased to an immense magnitude, so as to impede the function of the knee-joint. The nodulated figure of the tumor, the color of the skin, with the enlarged state of the veins, denoted its character to be of the fungoid kind. Her health became affected, and she showed signs of internal disease, consequently amputation was not proposed. The patient died. I have not the history of the case. The specimens were sent to me, I dissected the parts, and the following is the description of the appearances.

The tumor was composed of an aggregation of medullary and fungoid growths, which seemed to have their origin in the cellular connecting media of the muscles, vessels, and nerves, and scarcely a sign of the muscular fibres could be traced.

The popliteal artery, vein, and nerve, were with great difficulty traced, and the blood-vessels were so much compressed, that it seemed surprising how circulation had been carried on. The disease had made its way into the capsular ligament of the knee-joint, and had destroyed by ulceration the periosteal covering of the femur to a considerable extent beyond the superior part of the condyles; the absorbents had removed a great portion of the external surface of the bone, where the periosteal covering had been denuded. The right kidney was affected with small tumors of a medullary and fungoid character. The uterus was natural, but the ovaria were converted into large fungoid tumors. See Section on Diseases of the Uterus.

This is an excellent specimen of fungus hæmatodes.

- 1779 A fungoid tumor, which I removed from the outer surface of the chest of a dog; the tumor had been growing for six months.

About four months after the removal of the tumor, other enlargements of the same description began to show themselves in various parts of the body.

- 1780 A tumor extirpated from the breast of a Bitch Terrier. Previous to its removal it felt nodulated and elastic, the central part projected in a conical form, and from the thinness and discoloration of the integuments, it appeared as if it would soon slough, or ulcerate.

On cutting open the tumor, it was seen to be composed of an aggregation of various sized fungoid tumors, mixed with melanoid secretion. The tumor was very vascular, and several large arteries required to be tied during the operation. Twelve months after the removal of the diseased part, the animal became very ill, and died from the lungs becoming affected with the same disease.

- 1781 A splendid specimen of melanosis in the sternum. From a man 70 years of age, by trade a watch-maker, who had been indisposed nearly three years. He had been attended by several professional gentlemen, who, from his sallow countenance, and other symptoms, decided that the disordered state of health was occasioned by a diseased liver. During the last nine months of his life his health became more seriously affected, he was troubled with frequent cough, and great difficulty in breathing, accompanied with palpitation of the heart, which rendered him incapable of attending to business. The palpitation of the heart, and the violence of the cough increased, he became greatly emaciated, his inferior extremities were œdematous, and he occasionally voided bloody urine. For several months previous to his dissolution, the beating of the heart was distinct and violent, and there was an appearance of enlargement of the sternum. These symptoms induced the medical attendants to suppose that an aneurism at the arch of the aorta existed, and it was expected that it would soon ulcerate, or burst; this, however, did not take place, the patient died from the effects of profuse hæmaturia.

I did not see the patient during his illness, I was merely requested to make the post-mortem examination. On looking at the enlargement, and seeing the skin covering it of a deep purple color; from its having a nodulated appearance, and feeling

elastic, I did not hesitate in stating that I considered the tumor of a malignant kind, and not an aneurism. This opinion was not thought correct by those who had attended the patient, till the thorax was opened, when it was seen that neither the heart nor the arch of the aorta were in an aneurismal state. The heart was flaccid, the left ventricle rather capacious, and the parietes thickened. The mitral valves were natural, the aortic, at their base, were slightly thickened by semi-cartilaginous and osseous deposits, but not to such a degree as to have interfered with their functions during life. The coronary arteries had undergone a similar morbid change. The aorta at its origin, its arch, and the branches it gave off, were natural in size, but there were osseous deposits between the coats, which are common appearances in old subjects. There were two pints of water in each side of the thorax. The lungs were loaded with melanoid secretion. The liver was very large.

The kidneys were greatly enlarged, and their structure nearly destroyed by fungus hæmatodes and carcinoma.

The following are the morbid appearances noticed on dissecting the tumor.

On cutting through the integuments, the tumor was found to be composed of fungoid and melanoid matter contained in a cyst formed by the integuments, and by the external surface of a portion of the pleura; these are shown in the preparation.

The contents of this cyst were easily separated from its boundaries, coagulated lymph had been thickly deposited on the internal surface of the sac. Six of the cartilaginous extremities of the ribs on each side of the chest had been separated from the sternal attachment of this bone, which had been destroyed by ulcerative absorption (the effects of melanosis on its internal surface), as far as from its superior part to the ensiform cartilage; the latter was converted into bone, and its apex was curved upwards, a condition probably occasioned by the position of the chest at his work-table.

The only parts of the sternum that remained were

nearly the whole of the first division and a portion of the second, but they were affected with melanosis, the latter to a great extent.

All the cartilages of the ribs connected with the sac were blackened by melanoid secretion, as was the pleura costalis. If the man had lived much longer, the integuments covering the tumor would have sphacelated.

This is a very remarkable case of melanosis, combined with fungus hæmatodes and carcinoma.

I have seen melanosis in the sternum, a case of which was published in the Royal Medico-Chirurgical Transactions, and this preparation, with many others from the same patient, are in the Museum of the Royal College of Surgeons. I have also seen carcinoma in the sternum of a woman, whose mamma was affected with the same disease. In consequence of a considerable portion of the sternum having been absorbed in this case, and the heart's action having been felt so distinctly near the surface, I was not surprised that the gentlemen attending the patient should have imagined that the symptoms were those denoting aneurism of the heart or of the arch of the aorta.

See the Section on Diseased Kidnies, also the cast of the Tumor.

MISCELLANEOUS PREPARATIONS.

NORMAL AND MORBID.

- 1782 Parietal bone of a fœtus, dried and preserved in spirit, to show the arrangement of the osseous structure.
- 1783 Parietal bone of a child who died of hydrocephalus acutus. The bone is greatly developed. The arteries were minutely injected with size and vermillion, afterwards dried, and preserved in spirit of turpentine.
- This is a very beautiful preparation.
- 1784 Parietal bone, with the dura mater.
- The bone was extremely vascular; the parts having been put into alcohol, the blood-vessels are visible. The two last specimens from the same subject.

- 1785 Portions of the parietal bones of a child, showing the expanded state of the anterior fontanelle, the effects of hydrocephalus.
- 1786 A portion of cranium and dura mater of a child, who died of hydrocephalus, showing the bones greatly separated by the accumulation of fluid in the ventricles.
- 1787 Lumbar vertebræ and sacrum of a fœtus, showing the bones, intervertebral substances, cartilages, &c. There are two specimens in the bottle; one from a fœtus of about the 8th month, the other of the 6th.
- 1788 Sections of the os femoris of a child, showing the epiphyses, the centre of ossification, cancelli, &c.
- 1789 Patella, with its ligament. From a child. The arteries were injected with size and vermilion, afterwards dried and preserved in spirit of turpentine. This is a very beautiful preparation.
- 1790 The left hand of a gentleman, showing extensive laceration of the integuments, &c. of a portion of the palm, occasioned by the bursting of a gun. I amputated the arm soon after the accident, and it was necessary to secure several small arteries.

With a view of lessening the number of ligatures, to give the stump a better chance of healing by the first intention, I cut off both ends of the ligatures applied to the radial and ulnar arteries; a plan recommended by Dr. JONES.

The stump healed favorably, but about three weeks after the operation, the patient complained of pain in the inner surface of the fore-arm; the integuments became inflamed, and a small abscess formed, which was opened, and to my astonishment the noose which had been applied on the radial artery escaped with the pus.

After this the swelling and inflammation subsided, and the opening soon healed. This fact convinced me of the impropriety of cutting off both ends of the ligatures in amputations. But in a case of strangulated umbilical hernia, where there was a large portion of omentum in the sac, which could not be returned into the abdomen, it was removed, and several large arteries were tied, both ends of the ligatures being cut off; the patient soon recovered.

1791 A comminuted fracture of the tibia.

From a man. Several spiculæ were removed, and every endeavour was made to save the leg, for a considerable time, granulations formed, and the fractured ends were also well covered with healthy granulations, but there was a profuse discharge from the sore, and the patient's health became affected.

On carefully examining the leg, it was found that there were no signs of osseous union, and that the fractured ends of the bone were far apart; the leg was amputated, and the man did well. The leg was injected with size and vermilion, the skin and granulations were well colored with the injection. The asperities of the fractured ends of the bones had been removed by the absorbents and appearances were produced similar to those which are noticed in good stumps after amputation, or to those noticed in fractures of the femur, where one portion passes over the other, and ultimately becomes united as I shall describe on Fractures.

The internal periosteum was inflamed near the fractured parts, lymph had been deposited, and pus secreted.

1792 A compound fracture of the inferior part of a tibia, which had extended into the ankle-joint. Attempts were made for nearly a fortnight to save the limb, but without any prospect of success, constitutional symptoms became so urgent as to require amputation, as the only means of saving his life. The patient recovered. The leg was injected with size and vermilion, which shows the high state of vascularity of the external and internal periosteal coverings of the fractured parts, also nature's efforts to remove by absorption the dead parts of the bones, and these appearances are well shown in the specimen, the living and dead bones being evidently denoted by a line of demarkation. The synovial membrane was inflamed, and the cancelli of the bones were degenerated into that mouldering state denominated caries.

1793 A specimen of extensive compound fracture of the tibia.

From a young man. Attempts were made to save the limb for some time, inflammation came on,

followed by great swelling of the leg, matter formed beneath the fascia, and fever supervened. A consultation was held, amputation was proposed, and performed.

The stump sphacelated, and irritative fever came on, which caused death.

As the fracture was very extensive, and so much mischief had been done to the adjacent soft parts. I think in this case it would have been advisable to have performed the operation soon after the accident. Yet some cases of compound fracture do well by good management. I recollect a time when compound fractures of the extremities were removed immediately after the accident, and no attempts made to save the limb.

The diseased state of the skin near the injured part is seen in the preparation, also the sloughy condition of the fascia.

1794 A very extensive ulcer in the integuments of the leg of a man, near the inferior extremity of the tibia. The periosteal covering of the bone in this part is very thickly coated with what appears to be coagulated lymph, the edges of the ulcer do not show any signs of healthy granulations.

A section of the bone was made, the parietes were greatly thickened, and there were pus and small sequestra in the cavity of the bone near the internal malleolus, proving that this was a case of incipient necrosis, which, probably in the course of time, and by judicious treatment, might have undergone a spontaneous cure.

The limb was injected with size and vermillion, and although the skin was made red with the fluid, there does not appear in the specimen much vascularity in the edges of the ulcer, and very little in the part covering the periosteum.

1795 A specimen of necrosis in the superior part of the tibia of a boy 10 years of age. He was in an Hospital for several months, the disease was supposed to be a scrofulous affection of the knee-joint, and was treated accordingly.

An abscess formed near the tuberosity of the tibia, near the insertion of the ligamentum patellæ; it was opened and a considerable quantity of pus

escaped; there was afterwards a great discharge from the abscess. A probe was introduced into the abscess, and the bone was felt denuded; a consultation was held and amputation advised, which was performed.

I obtained the leg, and on examining the diseased parts, I found the capsule and structure of the joint healthy. The disease was necrosis, and nature had been making great efforts to form a new bone; the dead bone would in time have been absorbed, and a perfect union would have been effected. It is nearly 20 years since this operation was performed, fortunately the knowledge of pathology and the treatment of local diseases in many cases has so much improved of late years, that operations are not so often performed.

The abscess in the head of the tibia is shown in the preparation, likewise the spiculum belonging to the necrosed part, which is of a white color, also the appearance of the new bone.

1796 Necrosis of the tibia at its inferior extremity. A section of the bone shows hypertrophy of its parietes near the necrosed bone, likewise the quantity of osseous matter deposited to supply the place of the dead bone. The sequestrum is also seen.

1797 A section of the bones of a knee-joint affected with scrofula. From a young subject. The epiphyses are shown.

The parietes of the bones were remarkably thin, and very soft, in consequence of the phosphate of lime having been absorbed, and the cancelli being filled with caseous matter. The capsular ligament was inflamed, lymph had been deposited, and the crucial ligaments were softened and detached from their origins. The leg was amputated, but the patient afterwards died of phthisis pulmonalis.

1798 Section of the knee-joint of a young person, the whole of the natural structure is destroyed by scrofulous ulceration.

Fistulous openings formed between the joint and the integuments covering it, and there was a profuse discharge of pus, which affected the health. The leg was allowed to get into a bent position, and am-

putation was performed. The leg was injected with size and vermilion; the cancelli of the tibia and fibula are filled with caseous secretion, the bones (as they generally are in scrofula) were very soft.

It is very singular that in this preparation, ankylosis has taken place between the inner surface of the patella and the under surface of the head of the femur; the ligamentum patellæ is greatly elongated; it is preserved in the preparation.

The patient died of phthisis pulmonalis and tabes mesenterica.

1799 Section of a knee-joint, in the bent position. All the soft parts, also the cartilaginous coverings, had been absorbed, and ligamentous union had been effected. The cancelli of the bones were filled with caseous matter, the parietes were very thin and soft.

I have examined a great number of scrofulous joints, at different periods of the disease, but I have not in any instance found that osseous union had been effected. Is this want of union caused by a deficiency of phosphate of lime in the bones of scrofulous subjects?

When joints have been attacked with active inflammation, occasioned by local injury or any other exciting cause, and destruction of the soft parts has been the consequence, the patient not having a scrofulous diathesis, osseous union does take place when the case is properly managed.

1800 The ankle-joint and bones of the foot, affected with scrofula. All the soft parts of the joint had been destroyed by ulceration, and the cartilages absorbed. The bones of the tarsus were affected with the same disease, and the cancelli were filled with caseous matter.

The health of the patient being affected, and there not appearing any signs of disease in any other part of the body, the leg was amputated. The lungs and mesenteric glands afterwards became diseased, and the patient died.

This preparation shows admirably all the morbid changes in this destructive disease.

1801 Ankle-joint, the whole of the soft parts were destroyed by ulceration, and the cartilaginous coverings belonging to the articulation of the joint were ab-

sorbed,—the effects of chronic inflammation. The disease was occasioned by a violent sprain of the joint; the most active means had been adopted to check the progress of the disease, but ineffectually. Ulcerative openings of communication between the joint and skin covering it took place, from which there was a profuse discharge, which affected the man's health; and as there was no probability of saving the limb, it was considered advisable to perform amputation. From a man 34 years of age; the stump healed favorably, and he soon recovered his health. The bones did not appear affected with scrofula.

1802 Mortification of the internal surface of the cheek and integuments, the effect of mercury.

From a patient, 19 years of age, of a strumous diathesis. She was attacked with symptoms of icterus. Mercury was prescribed, which soon produced salivation; it could not be checked; sloughing of the gums and of the lining of the cheek commenced on the right side near the parotid gland and duct, and extended to the integuments of the cheek. Febrile symptoms supervened, accompanied with violent vomiting, and the patient died on the 6th day from the commencement of the ptyalism.

The peritoneum was thickly coated with coagulated lymph, and the intestines were agglutinated; the omentum was inflamed, and in some portions sphacelation had commenced.

Feculent matter was seen in the abdomen, this was found to have been occasioned by the laceration of a portion of the transverse arch of the colon, from over distention.

The liver was extremely large, and pale-colored, as if deprived of blood; the peritoneal surface was covered with organised lymph, which adhered firmly, proving the effects of chronic inflammation. The gall-bladder contained only a small quantity of viscid dark colored secretion. The spleen was large.

The mesenteric glands were converted into caseous matter, and the lumbar glands were affected in a similar manner.

The mucous glands in the ileum were greatly enlarged,

in some portions the mucous surface was ulcerated. The large intestines were inflamed, a small portion of the transverse arch of the colon was ulcerated, and the mucous surface of the rectum was sphacelated.

All the pelvic viscera were agglutinated by lymph; the uterus was perfectly healthy, but the ovaria presented appearances as of old corpora lutea; these I have seen in virgins, they are probably occasioned by some uterine excitement.

The lungs contained scrofulous tubercles, the heart was normal.

It is well known that some patients are more susceptible of the action of mercury than others, and that a small dose in some instances will produce a severe salivation. This fact I have noticed in practice, particularly in patients of a strumous diathesis, and if ptyalism is not produced, the medicine acts so powerfully on the constitution of these patients, as to excite into action scrofulous tubercles in the lungs or other viscera, which probably might otherwise have remained dormant.

1803 Foot and part of the leg of a man, 70 years of age, showing the effects of gangrena sicca.

The integuments and subcellular tissue were in a sphacelated state, and the extensor tendons of the toes were exposed.

The Surgeon who had attended the patient requested me to see him, thinking amputation ought to be performed to save his life. From the advanced age of the patient, I did not think it advisable to operate, and I stated to him the uncertainty of its success. This had no effect, he was a very courageous man, and felt anxious to live a little longer: at his particular request I amputated the limb; he bore the operation with great fortitude. I had occasion to tie the femoral artery only, which I found ossified; the other vessels I imagine to have been obliterated. The stump healed more favorably than I anticipated, but the ligature was not separated 'till the third week, and I did not think it right to attempt to remove it, knowing the diseased state of the artery. The patient's health improved, and he lived nearly six months from the time the operation was performed,

when he was attacked with phlegmonous erysipelas all over his body, accompanied with fever, and the integuments of the nates and sacrum sloughed, which caused his death. The semilunar valves of the aorta were shortened and thickened by osseous deposits, the coronary arteries were ossified. The lungs healthy. The thoracic and abdominal aorta ossified.

The liver was very large, solid, and granulated; the spleen large, the pancreas healthy. The kidneys granulated. There was also a very large scrotal hernia. See Section on Hernia.

The patient had lived irregularly for many years. I injected the leg with size and vermillion; the following are the appearances noticed on examining the leg and the stump.

All the coats of the arteries belonging to the leg were ossified, some of them obliterated, which accounted for the mortification of the leg.

The fascia and subcellular tissue were in a sphacelated state, and the extensor tendons and cutaneous nerves were exposed; these appearances are seen in the preparation, likewise the posterior tibial and plantar arteries.

The integuments of the stump had healed, with the exception of a small sinus, where the ligature belonging to the femoral artery had been, this continued to discharge.

Although the stump was well covered with integuments, the asperities of the sawn bone were not absorbed; nor were there any signs of osseous deposition at the end of the bone, but at about a quarter of an inch from the surface of the bone, exostosis had been effected to a considerable extent, which completely encircled the shaft of the femur. The coagulum in the artery and vein is shown.

1804 Cyst of a psoas abscess, converted into bone.

The disease had existed nearly two years, the vertebræ and theca vertebralis became affected, and the patient died.

This is the only specimen of ossification of the cyst of a psoas abscess I ever saw.

1805 Portion of an ovarial cyst, which adheres firmly to the peritoneal surface of the diaphragm, and a part

of the pleura pulmonalis is united to the serous covering of the diaphragm.

The patient had suffered for several years from the effects of ovarial dropsy; she had been tapped several times, but the whole contents of the cyst could not be drawn off; peritonitis came on, which caused death.

The sac had formed firm union with the serous covering of most of the abdominal viscera. The cyst was sacculated, it contained a glairy secretion, and on its internal surface there were a great number of serous cysts of various sizes.

This would have added greatly to the difficulty and danger in any attempt to remove it by operation.

1806 Part of a very large hydatid, with a portion of its cyst, removed from between the fasciculi of the muscular fibres of the glutæus maximus. A part of this muscle is attached to the cyst, which is shown in the preparation.

The patient was a woman, 40 years of age, very healthy; she had a very large tumor, situated in the right buttock, which had been growing for nearly five years, but it had only occasioned her pain in the thigh and leg for the last six months previous to my seeing her; she experienced great inconvenience in walking.

The tumor was about the size of a large melon, the integuments covering it adhered firmly, and it was not very moveable at its base.

Several Surgeons had examined the tumor carefully, some thought it might be removed with safety, others were of a contrary opinion; the disease was supposed to be an adipose tumor.

There being no probability of benefitting the patient, but by an operation, and she being very anxious to have any thing done to lessen her sufferings, I removed the tumor.

There was very great difficulty in detaching the cyst, the subcellular tissue surrounding it being so much condensed, and adhering so firmly; the tumor was embedded in the glutæus muscle, and deeply seated.

The cyst felt very hard, and on endeavouring to detach it from its base, several large arteries

belonging to this muscle were divided and tied; fortunately the cyst was slightly opened, when about a pint and a half of transparent fluid escaped, which proved that the enlargement had been produced by an hydatid.

The cyst was then freely opened, and a considerable portion of it, with the whole of the hydatid, removed. The base of the cyst adhered so firmly to the adjacent cellular tissue, and so closely to the gluteal artery (which was distinctly felt) that it would have been impossible to have avoided wounding the latter, if any attempt had been made to dissect away the whole of the cyst.

The integuments were united by sutures and adhesive plaster; the wound healed by the first intention, the woman was soon able to walk, and quite free from pain.

The pain in the thigh and leg had, I have no doubt, been occasioned by the tumor pressing on the ischiatic nerve.

1807 Two hydatids united, they were voided from the uterus.

1808 Two hydatids united. Expelled from the uterus.

1809 A large hydatid, everted, to show the young hydatids adhering to the internal surface; they are remarkably numerous.

This specimen was taken from the substance of a human kidney.

1810 An hydatid, from the layers of the mesentery, it was alive when removed, and when put into luke-warm water, showed all the signs of contractility for a considerable length of time. I have filled one of these hydatids with size and vermillion, from its mouth.

1811 An hydatid found beneath the serous coat of the intestine ileum of a monkey; there were several in the mesentery and lungs.

1812 Hydatids, very small and pendulous, from the omentum of a monkey; some of the arteries are shown in the preparation. There were hydatids in the liver.

1813 Lungs of a sheep nearly filled with large hydatids. The structure of the lung hepatised; there was water in both sides of the chest.

1814 A small hydatid, from the brain of a sheep.

1815 A portion of laminated fibrin, from a large aneurism.

- 1816 Phlebolites, from the uterine veins.
- 1817 A calculous concretion found in the substance of the lung.
- 1818 A portion of the parietes of the abdomen, from a woman who died some time after the operation of paracentesis. The operation was performed with a flat or lancet-shaped trocar. A portion of the omentum got into the canula, which obstructed the flowing of the fluid. A small portion of the omentum (after withdrawing the canula) entered the opening, and became organised, as seen in the preparation. This preparation was preserved to show that the lancet-formed instrument does not prevent this occurrence any more than the trocar of an angular shape. The imperfections of both show the propriety of having a well constructed double canula, the internal one having a catheter formed point with apertures, which should be introduced after withdrawing the trocar.
- 1819 A portion of the abdominal parietes, from a woman, who had been tapped with a lancet-shaped trocar.
- 1820 A portion of diaphragm. A part of the tendinous structure, converted into roundish cartilaginous bodies, which I believe to be the antecedent step to the deposition of bone, and which I have other specimens to show.
- 1821 A portion of diaphragm, partly converted into bone, dried and preserved in spirit of turpentine. From a man, 74 years of age, who had been subject to frequent vomiting and palpitation of the heart for nearly two years previous to his death. The aortic and the mitral valves were ossified, as were most of the large arteries of the body.
- 1822 Aortic valves of an ox.
- 1823 Brachial vein nearly obliterated by coagulated lymph, the effect of inflammation, consequent on venesection. The inflammatory action extended to the internal surface of the right auricle; irritative fever ensued, and produced the death of the patient.
- 1824 A portion of the vena cava of a camel, everted to show the muscular structure.
- 1825 A portion of the external jugular vein of a camel; to show the delicate structure of the semilunar valves.
- 1826 Inflamed blood, taken from a patient who had acute rheumatism, cured by bleeding and colchicum.

MODELS AND CASTS.

- 1827 Cast of the cranium of Bruce, the warrior.
- 1828 Cast of the head and face of a Malay.
- 1829 Cast of the head and face of a woman, born deaf and dumb. See the cranium.
- 1830 Cast of the head of CORDER, the assassin.
- 1831 Cast of the head and face of an idiot.
- 1832 Cast of the head and face of an idiot.
- 1833 A cast of the head of a boy, 7 years of age, born an idiot, and blind. He was very diminutive in stature, and had not enjoyed good health. About two months previous to his death he had symptoms of phrenitis, and his bowels were greatly disordered; convulsions came on, and he died suddenly.
- I was requested to examine the body. The calvarium was extremely thick, and dense in structure, and there were no signs of sutures. The membranes of the brain were thickened, the whole of the cerebrum extremely soft, and the ventricles greatly distended with water.
- The optic nerves were very diminutive, and the choroid coat was not colored with pigmentum nigrum. The mesenteric glands contained caseous matter, and the mucous glands in the small intestines were enlarged. All the other viscera were healthy.
- 1834 Cast of the head and face of a young man, who was born with hydrocephalus; the head is enormously large. An engraving of the head, with the history of the case, is given in Dr. Spurzheim's Physiognomical System.
- 1835 A cast of the head and face of a girl, 10 years of age, who was born with hydrocephalus. The head increased to an enormous size, vision in both eyes was destroyed, and she became idiotic.
- In the course of time the head became so very ponderous, that it was necessary to have it supported. The patient died of phthisis pulmonalis. The lungs were filled with miliary tubercles and excavations, the mucous glands in the ileum and cæcum

were greatly enlarged, and the mucous coat in some portions ulcerated.

The pericranium adhered very firmly, and the bones of the cranium appeared highly vascular. The sutures were obliterated, and the malar bones greatly enlarged, as seen in the cast. The dura mater, arachnoid membrane, and the pia mater were considerably thickened; there were no signs of convolutions, the cerebral structure was greatly attenuated, which was occasioned by an immense quantity of water in what might be termed one large ventricle; the optic nerves were extremely small.

See Section on Morbid Nerves.

- 1836 A cast of the head and face of a child, showing the effects of hydrocephalus.
- 1837 A cast of the head and face of a fœtus (a monster), a portion of the membranes of the brain and integuments had protruded near the posterior fontanelle.
- 1838 A cast of an hermaphrodite.
- 1839 A cast of a man's arm, dissected.
- 1840 A cast of a man's foot, dissected.
- 1841 A cast of a man's hand, dissected.
- 1842 A cast of a shoulder, exhibiting a dislocation.
- 1843 A cast, exhibiting a dislocated shoulder joint.
- 1844 A cast, showing inguinal hernia.
- 1845 A cast of an inguinal hernia.
- 1846 Cast of a man's hand, the index finger was amputated.
See the injected hand.
- 1847 A cast of a foot, showing the effects of mortification of the integuments.
- 1848 A cast of the foot of an old woman; all the toes belonging to both feet were destroyed by sphacelation during a severe winter. Several of the tendons which had sloughed were cut off, and some of the metatarsal bones were removed by nippers. Granulations formed, and cicatrisation was effected; the patient was able to walk tolerably well.
- 1849 Cast of the anterior portion of the thorax, showing the enlargement produced by an aneurism of the arch of the aorta.
- 1850 A cast of the anterior part of the chest, showing the effects of a very large aneurism of the arch of the aorta.
- 1851 A cast of the anterior part of the chest, showing an

enlargement produced by an aneurism of the arch of the aorta.

- 1852 Cast of the thorax, showing the effects of an aneurism of the arch of the aorta.
- 1853 A cast of the neck and chest, showing a large aneurism of the left carotid artery.
- 1854 A model of the face of a man, showing the effects of *noli me tangere*.
- 1855 Cast of the head and face of a child, showing fungus hæmatodes in the left eye.
- 1856 A model of the face of a woman, the left eye affected with melanosis.
- See the Section on Morbid Eyes.
- 1857 A cast of part of the chest, and the whole of the arm, showing a fungoid tumor in the humerus of great size, which occasioned a spontaneous fracture of the bone, and affected the axillary glands, &c.
- From a young boy.
- 1858 A cast of the arm of a young man, showing fungus hæmatodes of immense magnitude, which had its origin in the humerus, and produced a spontaneous fracture of this bone.
- 1859 Cast of extensive exostosis, which had its origin from one half of the internal surface of the bones of the pelvis, and extended downwards to a considerable distance along the internal surface of the shaft of the femur; it had produced ankylosis of the hip-joint.
- 1860 A cast of a mamma affected with tuberculated sarcoma.
See Section on Diseased Breasts.
- 1861 A cast of a malignant tumor, removed from the integuments of the tibia.
- 1862 A model of the heart and stomach, affected with carcinoma; from Madame SPURZHEIM. The preparations are in the Museum of the Royal College of Surgeons.
- 1863 A model of part of the leg of a horse, showing some of the muscles, tendons, bones, &c.

COMPARATIVE ANATOMY.

PREPARATIONS IN SPIRIT.

- 1864 A young Bat, without hair.
- 1865 *Vespertilio Volans* (young), from New Holland.
There are two specimens in the same bottle, the viscera of one shown. They were found in the marsupium, attached to the nipples.
- 1866 *Vespertilio Spectrum*. From Berbice.
- 1867 *Vespertilio Spectrum*. From Bengal.
- 1868 *Vespertilio Auritus*, Long-eared Bat.
- 1869 *Vespertilio Auritus*, viscera shown.
- 1870 *Vespertilio Auritus*, viscera shown.
- 1871 *Vespertilio Murinus*. The muscles, blood-vessels, and nerves shown.
- 1872 *Vespertilio Murinus*, a male. The heart, kidneys, urinary bladder, also the organs of generation exhibited. The penis large, testes within the abdomen.
- 1873 A Bat from Berbice, the hair and skin white, the viscera exhibited. This is a remarkable species.
- 1874 Mummy of a Bat, from Berbice.
- 1875 *Talpa Europæa*,—Mole; the hair was white, but in consequence of the body being putrid, the hairs came off. The small eyes, also the apertures of the ears are shown in the preparation.
- 1876 A young *Didelphis*, from the Gigantic Kangaroo—New Holland. It was taken from the marsupium. A male, testes above the penis. The mamma, nipples, and marsupium shown.
- 1877 A young Kangaroo. The mamma, marsupium, and the nipples, which are four in number, shown. The mouth of the animal is attached to one of the nipples, which is greatly elongated.
This specimen is much larger than the one above described.
The inferior extremities are not longer than the superior, which is quite the reverse in the parent.
A female, clitoris large.

- 1878 *Mus Capensis*. From the Cape of Good Hope.
 1879 *Myoxus Avellanarius*, or Dormouse.
 1880 A Dormouse; viscera shown.
 1881 A quadruped, not unlike the Dormouse, but with a much larger tail.
 1882 A quadruped from Berbice. Name not known.
 1883 *Sciurus Palmarum*. From Calcutta.
 1884 Head of a young *Myrmecophaga Jubata*, tongue shown. From Berbice.
 1885 A *Myrmecophaga Didactyla*. Two-toed Ant-eater. From Berbice.
 1886 A small *Myrmecophaga Didactyla*, from Berbice. A beautiful specimen.
 1887 A *Manis*, Scaly Ant-eater, or Pangolin, from Ceylon. A young animal, the umbilical cord is shown. This is a very beautiful specimen.
 1888 *Crocodylus*, young, from Berbice.
 1889 A young Crocodile, from Berbice. Viscera and the ductus vitello-intestinalis shown.
 1890 A young Crocodile, from Berbice.
 1891 A Monitor, from Berbice.
 1892 A Monitor, from Berbice.
 1893 A Monitor, from Berbice.
 1894 A Monitor, from Berbice.
 1895 A green Lizard, from Guernsey.
 1896 A green Lizard, from Guernsey. The viscera shown. The lungs filled with size and vermillion.
 1897 A green Lizard, from Guernsey.
 1898 A green Lizard. The integuments belonging to the inner surface of the neck, abdomen, tail, and legs, present scales of a large size, dense in structure, and they have a glistening appearance.
 1899 *Polychrus Virescens*, from Berbice. In Dr. WAGLER'S Work on Reptilia, there is a beautiful engraving of this Lizard.
 1900 *Polychrus Virescens*.
 1901 A *Polychrus Virescens*, the viscera shown.
 1902 *Lacerta*, blue, from Berbice. The oviducts and ova shown.
 1903 A blue Lizard, from Berbice.
 1904 A blue striped Lizard, from Berbice.
 1905 A striped Lizard, from Berbice.
 1906 A black Lizard, from Berbice.
 1907 Two Lizards, from the Cape of Good Hope.

- 1908 Four Lizards, from Berbice.
- 1909 A Lizard, the viscera shown.
- 1910 A Lizard, the viscera, &c. shown.
- 1911 A Lizard, from Berbice.
- 1912 A Lizard, from Do.
- 1913 A Lizard, from Do.
- 1914 A Lizard, from Do.
- 1915 A Lizard, from Do.
- 1916 A Lizard, from Do.
- 1917 Two Lizards, from Do.
- 1918 A beautiful Lizard, from Do.
- 1919 Draco Volans, Flying Dragon.
- 1920 Iguana, from Berbice.
- 1921 Iguana, from Do.
- 1922 Iguana, from Do.
- 1923 Iguana, small, from Do.
- 1924 A large Iguana. In the same bottle there are two beautiful Lizards.
- 1925 Gecko, from Berbice.
- 1926 Gecko, from Do.
- 1927 Gecko, a portion of the tail has been re-produced.
- 1928 Gecko. There are two in the same bottle.
- 1929 A small Gecko.
- 1930 A small Gecko, which had re-produced a tail.
- 1931 A young Gecko, with its egg, from Berbice.
- 1932 Chameleon, of large size, the viscera shown. From Calcutta.
- 1933 Chameleon, from Bombay.
- 1934 A Chameleon; the tongue, viscera, and ova shown. From Berbice.
- 1935 Chameleon; the tongue, viscera, and ova shown.
- 1936 Chameleon; the globe of the eye in this reptile is very large.
- 1937 Chameleon; the tongue shown, which is very long.
- 1938 A Chameleon, from Berbice. The tongue, muscles, &c. shown, the viscera minutely injected.
- 1939 Two Newts, male and female. The testes, oviducts, and ova are shown. There is a small Lizard in the same bottle.
- 1940 Three Newts.
- 1941 A Newt.
- 1942 Larvæ and young Frogs, in the different progressive stages—English.
- 1943 English Frogs.

- 1944 A Frog, inflated.
- 1945 A Frog; the viscera shown, the ova in the oviducts.
The animal was killed at the time of sexual intercourse.
- 1946 A Frog; heart, testes, &c. shown.
- 1947 Two beautiful Frogs, from Berbice.
- 1948 A curious Frog, from Berbice, viscera shown.
- 1949 Larva of the *Rana Paradoxa*, from Berbice.
The mouth, nostrils, eyes, inferior extremities, and anus shown. The foot of the right hinder leg is wanting, probably the result of accident or malformation. The anterior extremities are within the parietes of the thorax.
- 1950 Larva of the *Rana Paradoxa*, from Berbice. The external appearance is similar to the one last described, only rather more developed, the hinder legs normal.
- 1951 Larva of the *Rana Paradoxa*, from Berbice. The hinder legs shown, the anterior extremities in the parietes of the thorax.
- 1952 Larva of the *Rana Paradoxa*, from Berbice. The viscera shown, also the convoluted arrangement of the intestines.
- 1953 Larva of the *Rana Paradoxa*, the hinder legs shown, also the viscera.
- 1954 Larva of the *Rana Paradoxa*, the hinder legs shown, the fore ones within the thorax, the viscera shown.
- 1955 Larva of the *Rana Paradoxa*. The mouth, eyes, &c. shown. The fore and hinder extremities not developed.
- 1956 *Rana Paradoxa*. The mouth, heart, lungs, and other viscera shown; also the singular spiral arrangement of some of the intestines. The extremities not developed.
- 1957 *Rana Paradoxa*.
- 1958 Three perfect Frogs, of the *Rana Paradoxa*.
- 1959 Five curious Tree Frogs, from Berbice.
- 1960 A Tree Frog, from Berbice. Viscera shown.
- 1961 A large Tree Frog, from Berbice. Some of the viscera shown.
- 1962 A Toad; viscera shown.
- 1963 A large Toad, from Guernsey. Some of the viscera shown.
- 1964 Tongue, heart, lungs, stomach, and ova of a Guernsey Toad.

- 1965 A large Toad, from Calcutta.
 1966 An English Slow-worm.
 1967 Two large Do.
 1968 A Do.
 1969 A Do.
 1970 A Do., with an English Snake.
 1971 A young *Anguis Fragilis*, or Slow-worm, from Berbice.
 1972 *Amphisbæna*, very large, from Berbice.
 1973 A large *Amphisbæna*, from Berbice.
 1974 A large *Amphisbæna*, with two young ones, from
 Berbice.
 1975 Two young *Amphisbæna*, from Berbice.
 1976 *Amphisbæna*, from Do.
 1977 Young *Amphisbæna*, from Do.
 1978 *Amphisbæna*, from Do.
 1979 A Silvery *Amphisbæna*, from Do.
 1980 *Amphisbæna*, from Do.
 1981 A Coral Snake, from Do.
 1982 A Do. from Do.
 1983 Two large Coral Snakes, from Do.
 1984 Two Coral Snakes, from Do.
 1985 A Do. from Do.
 1986 A Do. from Do.
 1987 A large Snake, striped like a Zebra.
 1988 A striped Snake.
 1989 A long striped black and white Snake, from Berbice.
 1990 A small Snake, striped, from Berbice.
 1991 A beautiful spotted Snake.
 1992 A small spotted Snake, from Berbice.
 1993 A spotted Snake, from Do.
 1994 A very long spotted Snake, from Do.
 1995 A small Snake, from Do.
 1996 A venomous Snake, from Berbice, of a blue color,
 commonly called the Whip Snake.
 1997 A purple-colored Whip Snake, from Berbice.
 1998 A Whip Snake, from Do.
 1999 A purple-colored Whip Snake, from Do.
 2000 A Whip Snake, from Do.
 2001 A very long Whip Snake, from Do.
 2002 A Whip Snake, from Do.
 2003 Two beautiful Whip Snakes, from Do.
 2004 A *Coluber*, with a Whip Snake.
 2005 A Whip Snake, from Calcutta.
 2006 A Boa Constrictor.

- 2007 A Boa Constrictor.
- 2008 Head and integuments of a Boa Constrictor. The tongue and teeth shown. The symphysis and rami of the jaws in the Boa, &c. are connected by ligaments, which allow of the mouth and fauces expanding in the act of swallowing large animals.
- 2009 Anguis, English.
- 2010 Anguis, English, the oviducts and ova shown.
- 2011 English Snake, with the ova.
- 2012 Two English Snakes.
- 2013 Part of an English Snake, some of the viscera, nerves, &c. shown.
- 2014 An English Snake.
- 2015 Head of an English Snake, tongue shown.
- 2016 Ova of a Snake.
- 2017 A beautiful specimen of the Crotalus or Rattle Snake, from North America. The poisonous fangs, which are tubular, are shown, also the rattle.
- 2018 A Crotalus, from Berbice.
- 2019 A small Crotalus, or Rattle Snake, from Calcutta.
- 2020 Crotalus Horridus, dried.
- 2021 Head of a Crotalus, the poisonous fangs shown.
- 2022 The head and tail of a Crotalus, preserved in spirit ; the fangs and rattle shown.
- 2023 The rattle of a Crotalus, dried.
- 2024 Venomous Snakes, from Berbice.
- 2025 A beautiful specimen of a young Cobra de Capello, from Calcutta.
- 2026 A Snake, from Berbice.
- 2027 The Mourning Snake, from Calcutta.
- 2028 A large Coluber, from Do.
- 2029 Two Mourning Snakes, from Do.
- 2030 A venomous Snake, from Do.
- 2031 A beautiful Snake, from Do.
- 2032 A harlequin Snake, from Do.
- 2033 A harlequin Snake, from the Cape of Good Hope.
- 2034 A harlequin Snake, from Do.
- 2035 A venomous Snake, from Do.
- 2036 Two Snakes, from Do.
- 2037 A very small Snake, from Do.
- 2038 Crotalus Berus, English. A male, the fangs shown.
- 2039 A-Crotalus Berus, English.
- 2040 A Crotalus Berus, or Adder ; viscera shown.

- 2041 Head and part of the integuments of a Viper.
 2042 *Crotalus Berus*, English, of a black color. This is a rare specimen.
 2043 A *Coluber*.
 2044 A very large *Coluber*.
 2045 A large *Coluber*.
 2046 A *Coluber*.
 2047 A *Coluber*.
 2048 A large *Coluber*.
 2049 A *Coluber*, from Berbice.
 2050 A Do. Do.
 2051 A poisonous Snake, from Berbice ; the fangs shown.
 2052 Two venomous Snakes, from Berbice.
 2053 Venomous Snakes, from Do.
 2054 A small Snake, venomous, from Do.
 2055 A venomous Snake, from Do.
 2056 A Do. from Do.
 2057 A Do. from Do. The color a yellowish white, with black spots and broad circles.
 2058 A venomous Snake, from Berbice.
 2059 Two Snakes, from Do.
 2060 A Snake, from Do.
 2061 Four Snakes in one bottle, from Do.
 2062 A Snake from Berbice.
 2063 A Do. from Do.
 2064 A Do. from Do.
 2065 Three venomous Snakes, from Berbice.
 2066 Three Do. Do.
 2067 Three Do. Do.
 2068 A blue and white Snake, from Do.
 2069 A Snake, from Berbice.
 2070 A small Snake, Do.
 2071 A Snake, Do.
 2072 A Do. from Do.
 2073 A Do. from Do.
 2074 A Do. from Do.
 2075 A small Snake, from Berbice.
 2076 A Snake, from Do.
 2077 A Do. from Do.
 2078 A Do. from Do.
 2079 A Do. from Do.
 2080 A Do. from Do.
 2081 A Do. from Do.
 2082 A Do. from Do.

- 2083 A venomous Snake, from Calcutta.
 2084 A beautiful Snake, from Berbice.
 2085 A Snake, with a Mouse in its stomach, from Berbice.
 2086 A Snake, from Berbice.
 2087 A Do. Do.
 2088 A Do. Do.
 2089 A Do. Do.
 2090 A Do. Do.
 2091 A Do. Do.
 2092 A Do. Do.
 2093 Two very beautiful Snakes, from Berbice.
 2094 A Snake, from Do.
 2095 Three small Snakes, from Do.
 2096 A Snake, from Do.
 2097 Two small Snakes, from Do.
 2098 A small Snake, from Do.
 2099 A beautiful Snake, from Do.
 2100 A Do. from Do.
 2101 A Snake, from Do.
 2102 A very large Snake.
 2103 A Snake.
 2104 Two Snakes.
 2105 A large Snake.
 2106 A venomous Snake.
 2107 Three Snakes.
 2108 A large Sea Snake.
 2109 Head of a large Snake, the teeth shown.
 2110 Head and integuments of a venomous Snake.
 2111 Cuticle, cutis, and one of the lungs of a Snake ; the
 latter minutely injected.
 2112 Cuticle of a Snake.
 2113 Oviducts and ova of an English Snake.

DRY PREPARATIONS.

Stuffed—Dissected—Skeletons—Crania.

MAMMALIA.

- 2114 A Monkey ; the muscles dissected.
- 2115 A Monkey ; the muscles dissected, the arteries injected.
This was a very malicious animal ; the bad development of the skull denotes the character ; the creature was killed.
- 2116 A Monkey ; the muscles and arteries preserved. There is a fracture of the right parietal bone, occasioned by a blow with a thick stick from the Keeper of a Menagerie, which caused immediate death.
Monkeys generally have only one nasal bone, of a triangular figure, but in the skull of this Monkey there are two (as in man), and although I have dissected a great number of Monkeys, I have only seen two specimens showing this fact.
- 2117 Skeleton of a young Cercopithecus, or Howling Monkey, from Berbice.
In the Museum of the Royal College of Surgeons, there is a cranium of a male and female Monkey of this tribe, from my collection, and the remarkable bony cavity in the larynx is shown, which is most developed in the male.
- 2118 Skeleton of a Monkey. The right thigh-bone had been fractured at its superior portion, and solid osseous union is effected, without much shortening of the limb. The temporary and permanent teeth are shown.
- 2119 Skeleton of a Monkey. Some of the permanent and temporary teeth are exhibited.
- 2120 Skeleton of a Monkey. Some of the permanent and temporary teeth are exhibited. The skull is badly developed. The animal was very savage.
- 2121 Skeleton of a Monkey.
- 2122 Skeleton of a small Monkey.
- 2123 Skeleton of a Monkey ; the first and second teeth

exhibited. The external surface of the common bones of the cranium is partly destroyed by ulceration, the effects of painful dentition ; the animal died of convulsions.

- 2124 Skeleton of a large Baboon.
- 2125 Skeleton of a large Baboon.
- 2126 Skeleton of a Jacchus.
- 2127 Hedge-hog. The integuments, bristles, panniculus carnosus, and external muscles of the body are preserved.
- 2128 Skeleton of a hedge-hog.
- 2129 Cranium of a Bear.
- 2130 Ditto Ditto.
- 2131 Cranium of a young Bear.
- 2132 Skeleton of a Pole-cat.
- 2133 Skeleton of a large Otter.
- 2134 Skeleton of a Terrier.
- 2135 Cranium of a Spaniel.
- 2136 Ditto.
- 2137 Ditto.
- 2138 Cranium of a Bull-dog.
- 2139 Cranium of a Mastiff. In consequence of the crown of one of the posterior teeth in the upper jaw having been fractured through its centre, one of its fangs, and one belonging to the adjacent tooth, is partly destroyed, also a considerable portion of the external alveolar process.
- 2140 Cranium of a Dog, between the Terrier and Mastiff.
- 2141 Cranium of a Dog, between the Mastiff and Terrier.
- 2142 Cranium of a Terrier.
- 2143 Ditto.
- 2144 Ditto.
- 2145 Ditto.
- 2146 Ditto.
- 2147 Cranium of a Dog, between the Terrier and Pug.
- 2148 Cranium of a Newfoundland Dog.
- 2149 Ditto.
- 2150 Cranium of a Blood-Hound. The external edge of the alveolar processes, near the crown of the teeth, is affected with exostosis in both jaws, also the edges of the orbits. The dog was very old.
- 2151 A young Jackal, the arteries injected. Several of the ribs on the right side of the chest, had been fractured, and are united by bone.

- 2152 A Jackal; the muscles preserved.
- 2153 Cranium of an old Fox.
- 2154 Cranium of a Fox.
- 2155 Cranium of a young Fox; the temporary and permanent teeth shown.
- 2156 Skeleton of an Ichneumon.
- 2157 Skeleton of an Hyæna. The thighs and legs are greatly deformed, and all the bones of the body are very soft, from mollities ossium. The alveolar portion of the jaws expanded by the growth of secondary teeth, and the surface of the skull is partly absorbed. The first and second teeth are shown. The animal died in a menagerie.
- 2158 Skeleton of a Badger.
- 2159 Cranium of a male Lion. The animal was in the menagerie at the Tower a great number of years. There were scrofulous tubercles in the lungs, and some of the bones were affected with exostosis.
- 2160 Cranium of a young Lion. The animal was born in the menagerie at the Tower; it was very delicate from its birth, and at the time the permanent teeth began to show themselves at the gums, the health of the creature declined, and it appeared to suffer great pain; the bowels were greatly disordered, and convulsions supervened, which caused death. The bones of the thighs and legs were gibbous, the effects of mollities ossium; and the bones of the external part of the skull were partially destroyed by ulceration; the diploë greatly enlarged, and the bones expanded. The upper and lower jaw bones are very soft in structure; the temporary and permanent teeth shown. If the temporary teeth had been extracted at a proper period, probably all the morbid changes described might have been prevented, and the life of the animal saved.
- 2161 Cranium of a Bengal Tiger.
- 2162 Cranium of a Leopard.
- 2163 Skeleton of the *Myrmecophaga Jubata*, from Berbice. This very singular Ant-eater was caught by the right hinder foot in a steel trap, the bones were so much shattered, that they could not be articulated for the skeleton; the foot is preserved in spirit to show its configuration.

- The tongue, larynx, pharynx, and stomach, are in the
Museum of the Royal College of Surgeons.
- 2164 Foot of the *Myrmecophaga Jubata*.
- 2165 Flexor tendons of the fore-foot of the *Myrmecophaga Jubata*.
- 2166 A portion of skin, with the hairs of a *Myrmecophaga Jubata*.
- 2167 Manis, long-tailed. Pangolin.
- 2168 Cranium of a Wild Boar.
- 2169 Cranium of a Pig.
- 2170 Skeleton of a Peccary, *Tajassu*, from Berbice.
- 2171 Skeleton of a young Foal; the teeth shown.
- 2172 Skeleton of a young Ass.
- 2173 Cranium of a Horse, with three of the cervical
vertebræ.
- 2174 Cranium of a Horse.
- 2175 Ditto.
- 2176 Cranium of a young Foal; the teeth shown in the
alveolar portion of the jaws.
- 2177 Cranium of a Zebra.
- 2178 Cranium of a Mule.
- 2179 Cranium of an Ass.
- 2180 Cranium of a Stag, with the horns.
- 2181 Skeleton of a Deer.
- 2182 Skeleton of an Antelope.
- 2183 Cranium of a Ram, with the horns.
- 2184 Cranium of a Ram, with the horns.
- 2185 A young Kid; the muscles dissected.
- 2186 Cranium of an American Argali, with the horns.
This animal was at times extremely ferocious, and
in attempting to escape from the place where it was
confined, struck its head so violently against some
iron pales as to fracture two of the cervical vertebræ,
which occasioned sudden death.
- 2187 Cranium of a Sheep.
- 2188 Cranium of a Cow.
- 2189 Skeleton of a Porcupine, with a prehensile tail. From
Berbice.
- 2190 Skeleton of a Virginian Opossum.
- 2191 Skeleton of a Virginian Opossum.
- 2192 Skeleton of a Virginian Opossum.
- 2193 Skeleton of a Kangaroo. New Holland.
- 2194 Skeleton of a Kangaroo. New Holland. There is
an oblique fracture at the middle portion of the

thigh-bone on the right side, which is firmly united by osseous matter, and the limb is greatly shortened.

- 2195 A stuffed Seal, in a glass case.
- 2196 Cranium of a Walrus.
- 2197 Os Penis of the Trichechus, or Walrus.
- 2198 A stuffed Porpoise—young.
- 2199 Skeleton of a Porpoise.
- 2200 Cranium of a Porpoise.
- 2201 Cranium of a Porpoise.
- 2202 Cranium of a Porpoise.
- 2203 Tooth of the Monodon, or Narwhal.
 “ The young animal has originally two teeth (one in each bone of the upper jaw), of unequal size ; both are rarely found in the full grown animal.”
- 2204 Tooth of a Monodon—small.
- 2205

A V E S.

- 2206 Skeleton of a Sparrow-hawk.
- 2207 Skeleton of a Sparrow-hawk.
- 2208 Skeleton of a Raven, with the muscles.
- 2209 Skeleton of a Toucan, from Berbice.
- 2210 Skeleton of a Toucan.
- 2211 Skeleton of a Parrot.
- 2212 Skeleton of a Parrot.
- 2213 Skeleton of a Parrot.
- 2214 Skeleton of a Parrot.
- 2215 Skeleton of a Parrot.
- 2216 Skeleton of a Parrot.
- 2217 Skeleton of a Peacock.
- 2218 Skeleton of a Malay Cock.
- 2219 Skeleton of a Silver Pheasant.
- 2220 Skeleton of a Turkey.
- 2221 Skeleton and muscles of the Curasso.
- 2222 Skeleton of a Tetrao Urogallus, the Wood Grouse.
- 2223 Skeleton of a Trumpeter—Crepitans, from Berbice.
- 2224 Skeleton of a Cassowary—New Holland Ostrich.
- 2225 Skeleton of a crested Crane.
- 2226 Skeleton of a Crane.

- 2227 Skeleton of a Heron.
- 2228 Skeleton of a Heron ; arteries injected.
- 2229 Skeleton of a red Flamingo, from Spain.
- 2230 Skeleton of a Spoon-bill.
- 2231 Skeleton of a Spoon-bill.
- 2232 Skeleton of a Spoon-bill.
- 2233 Skeleton of a Gull.
- 2234 Skeleton of a Gull.
- 2235 Skeleton of a Gull.
- 2236 Skeleton of a whistling Swan—male. The bird was shot in England.
- 2237 Skeleton of the whistling Swan—female. Part of the keel cut away, to show the cavity which contains the curling portion of the trachea ; the bronchial larynx is also preserved.
- 2238 Skeleton of a white Swan.
- 2239 Skeleton of a black Swan, from New Holland.
- 2240 Skeleton of a Drake.
- 2241 Skeleton of a large Pelican. The Gula saccata and quill portions of the large feathers of the wings are preserved.
- 2242 Skeleton of a Gannett.

REPTILIA.

- 2243 Skeleton of a Tortoise.
- 2244 Skeleton of a Tortoise.
- 2245 Skeleton of a Tortoise.
- 2246 Shell of a Tortoise.
- 2247 Shell of a Tortoise.
- 2248 Shell of a Tortoise.
- 2249 Skeleton of a Turtle.
- 2250 Skeleton of a Crocodile, from Berbice.
- 2251 Cranium of a Crocodile.
- 2252 Cranium of a Crocodile.
- 2253 Cranium of a Crocodile.
- 2254 A stuffed Alligator, from Berbice.
- 2255 A stuffed Alligator.
- 2256 Skeleton of an Alligator, from Berbice.
- 2257 A stuffed Iguana, from Berbice.
- 2258 A stuffed Iguana, from Berbice.
- 2259 A stuffed Iguana, from Berbice.

- 2260 Skeleton of a large Iguana—Berbice.
 There is an oblique fracture in the middle part of the thigh-bone, which is united by ossific deposit in a clumsy manner, and great shortening produced.
- 2261 Skeleton of a small Iguana.
- 2262 Skeleton of a Frog.

PISCES.

- 2263 A stuffed *Zygæna*, or hammer-headed Shark.
- 2264 Head of a Shark.
- 2265 Jaws of a large Shark.
- 2266 Jaws of a small Shark.
- 2267 Jaws of a small Shark.
- 2268 A stuffed Dog-fish.
- 2269 Tail of the *Pastinaca*, or Sting-ray.
- 2270 A stuffed Sturgeon.
- 2271 The upper jaw of the *Pristis*, or Saw-fish.
- 2272 Upper jaw of a Saw-fish.
- 2273 Upper jaw of a Saw-fish.
- 2274 Jaw of a Saw-fish.
- 2275 Head of a Sword-fish.
- 2276 Head of a large Pike.
- 2277 Head of a small Pike.

MISCELLANEOUS PREPARATIONS,

CONTINUED.

- 2278 Model of a sphenoid bone, greatly magnified.
- 2279 Four of the lower lumbar vertebræ with the sacrum showing spina bifida in the last lumbar vertebra and the sacrum. From an infant; the feet and legs were greatly deformed.
- The tumor was very large, the integuments extremely vascular; sloughing supervened, the theca vertebralis became affected, and the child died of convulsions.
- Inspection. There was a considerable quantity of water in the ventricles of the brain, which commu-

nicated with the membranes of the spinal canal, and the sac of the tumor.

The viscera of the thorax and abdomen were healthy.

2280 Cast of a spina bifida. See Section on Spina Bifida, No. 60.

2281 A cast of the pelvis, and inferior extremities of a woman, showing the gibbous state of the bones of the thighs and legs, the effects of rachitis. She was very diminutive in stature.

2282 Bones of the right half of the pelvis, with the femur, tibia and fibula ; from the subject last described.

The thigh bone is slightly gibbous, the parietes extremely thick and very solid, the cancelli greatly developed and very rugged ; osseous matter deposited on the external surface of the condyles, and their surface resembles polished ivory.

The tibia and fibula are greatly curved and flattened, especially the latter, and osseous ankylosis has been effected between the articular portion of the head of the fibula, and that belonging to the tibia.

The parietes of the tibia are extremely thick and solid at the posterior and superior portions of the arch, and the cancelli are large and dense in structure. The articulating surface of the head of the tibia presents the same appearances as those seen on the head of the femur.

In the 7th Volume of the Royal Medico-Chirurgical Transactions, page 404, there is a very valuable communication on Rickets, by E. STANLEY, Esq.

2283 Section of a thigh bone, showing the effects of rickets.

2284 Thigh bone of a man ; it is extremely large.

2285 A thigh bone ; the neck and head are placed nearly perpendicularly.

2286 Portion of a thigh bone, showing the effects of ostitis and periostitis. The external surface of the bone is greatly thickened, and rendered rough by small osseous deposits.

2287 Sections of the superior portion of a thigh-bone, showing the most decided signs of ostitis and its effects. The synovial membrane is ulcerated, and a portion of the cartilaginous covering of the head of the femur absorbed.

The history of this case is not known

2288 Tibia and fibula, showing the effects of periostitis,

ostitis, and exostosis. From an old man, who had for several years been troubled with an extensive ulcer in the integuments, which could not be cured. His health became affected, and it was considered right to amputate the limb.

- 2289 A section of the inferior portion of a fibula, minutely injected, the earthy matter has been removed by muriatic acid; the vascularity of the cellular media is beautifully shown in the specimen.

- 2290 A fibula; the superior portion enlarged, resembling a united fracture; the external surface rough, and there are two sharp spicula.

The section of this part of the bone shows a thickening of the parietes, and a diminution of the medullary cavity; there had not been a fracture.

- 2291 Cast of the leg of a man, showing great enlargement of the knee-joint, the effects of exostosis.

See Section on Diseased Bones, No. 261.

- 2292 A slice of an osteo-sarcomatous tumor, which had its origin from the inferior jaw-bone of a woman.

See the Model.

- 2293 A fungoid and scirrhus tumor, which had its origin from the cellular tissue of the cancelli of the inferior portion of the right tibia; by its growth it had produced a spontaneous fracture of this bone. The disease had likewise caused destruction of the integuments to a considerable extent.

From a man; the disease had been progressively increasing for several years; there was a profuse discharge of pus, sometimes mixed with blood; his health became seriously affected, and there being no hope of saving the limb, it was amputated.

On examining the morbid parts, some of the blood-vessels were found obliterated, and a portion of the tendon of the flexor longus digitorum pedis perforans was exposed in the ulcerated part.

- 2294 A portion of sternum affected with carcinoma; there is also in the same bottle part of a tumor of the same character, which was situated on the outer surface of the periosteal covering of this bone.

The disease in the sternum had formed in the centre of the bone, and if the patient had lived a little longer the morbid growth would have occasioned absorption of the periosteum and integuments.

2295 Pelvis of a Kangaroo.

2296 Necrosis of the humerus of a bird.

The original bone nearly absorbed, the newly formed one very large, and its external surface very irregular. In the same bottle there are two ribs of a foetus, ankylosed at their posterior extremities.

2297 Stump of a man's leg; the arteries, nerves, and muscles shown. A sufficient quantity of integument not having been saved to cover the surface of the stump, the bones projected, the soft parts became inflamed and swollen; and irritative fever supervened, which caused death.

2298 Section of a knee-joint; the structure natural, some of the muscles and the cutaneous nerves are shown, the latter bulbous.

The history of this case is given in the Section on Morbid Nerves, No. 565.

2299 The inferior portion of the abdominal aorta, and the iliacs converted into bone.

2300 Arch of the aorta, injected with wax, &c. The left vertebral artery is given off between the left carotid and subclavian.

In the same bottle, the arteries of a kidney injected are shown, the coats partly ossified.

2301 Arch of the aorta of a Seal, with its branches.

2302 Diseased lumbar and pelvic absorbent glands, with the aorta, vena cava, &c.

A gentleman, 55 years of age, had been for several years afflicted with symptoms denoting organic disease of the liver, and of the digestive organs.

The lungs became affected, he was greatly emaciated, and a few months previous to his death symptoms of cerebral disease supervened.

The bronchial tubes were loaded with mucus mixed with blood; there were several large tubercles in the lungs composed of a white pulpy matter, and there were several large excavations.

The bronchial, thoracic, and the concatenated glands were similarly affected. There was a great accumulation of fat beneath the serous covering of the heart; the muscular structure of this viscus was very flaccid, the valves healthy, the coronary arteries ossified, but pervious.

The external surface of the liver was thickly coated

with organised lymph; its structure affected with cirrhosis, the gall-bladder was filled with dark-colored viscid fluid. Most of the mesenteric glands were converted into pulpy masses, not caseous.

The aorta and the vena cava were compressed by the morbid lumbar glands, which must, in some degree have impeded the circulation through them. There was a considerable quantity of milky fluid between the arachnoid membrane and the pia mater; the convolutions of the brain were greatly flattened, and the ventricles contained four ounces of water.

I merely inspected the body.

2303 Ileum; the mesenteric glands are converted into masses of caseous matter of considerable size.

From a child; the lungs were nearly filled with miliary tubercles, and there were several vomicae.

2304 A splendid specimen of fungus hæmatodes in the inguinal, pelvic, and lumbar absorbent glands, with a portion of the duodenum ulcerated.

Part of the thoracic aorta, vena cava, and iliac vein are preserved in the preparation; the two latter are obliterated by fungoid secretion.

The patient had a carcinomatous testicle, which was extirpated. About twelve weeks after the operation, the glands in the groin began to enlarge, and a tumor was distinctly felt in the course of the iliac glands.

The growth of these tumors occasioned great constitutional disorder, and there was that sallow countenance which is generally noticed in those afflicted with carcinoma or fungus hæmatodes.

The digestive organs became deranged, febrile symptoms ensued, which with the progress of the disease exhausted the power of his constitution, and he died.

The disease in the lumbar glands had excited inflammation of the peritoneum, and firm adhesion had been effected between the internal surface of this membrane, and a considerable portion of the external coat of the inferior part of the duodenum.

The morbid growth had likewise by progressive ulceration caused an opening of communication with this intestine, and its mucous surface was completely destroyed as far as the ductus communis chole-

dochus. The opening of this duct into the bowel is shown by a black bristle in the preparation.

See Section on Morbid Testes, No. 1462.

2305 Medullary sarcoma in the heart, lungs, œsophagus, and vena cava superior.

From a man, 45 years of age; he was admitted into the Sick Ward of Cripplegate Workhouse.

The patient informed me that he had been afflicted with disease in the lungs for nearly five years, which had been increasing for more than twelve months, and that he had been a considerable time in an Hospital.

He was greatly emaciated, dyspnœa was very distressing, and he complained of acute pain in the chest; the expectoration, muco-purulent; pulse very small, 120, sometimes 140 in a minute, and he had palpitation of the heart. The patient lived only a short time after his admission.

Inspection. The adhesion of the pleuræ on both sides of the thorax was so firm as to render it difficult to remove the thoracic contents.

The pleura pulmonalis, in some portions, was nearly half an inch in thickness, and of a semicartilaginous density.

The heart, aorta, the two trunks of the pulmonary artery, the œsophagus and trachea seemed almost lost in the diseased lungs, which had surrounded these parts.

On cutting through the lungs, their natural structure seemed to have been nearly destroyed by medullary and fungoid tubera, and there were likewise a great number of miliary tubercles.

The pericardium was greatly thickened, and on its anterior surface bone had been formed to about the size of a dollar, which is shown in the preparation.

The serous covering of the heart was highly inflamed and thickened, and there were medullary tumors in the right auricle.

The heart was small, structure soft and inflamed, and there were several small medullary tubercles beneath the serous covering of the ventricles. The internal surface of the auricles and ventricles was highly inflamed, the valves normal.

The superior cava and part of the right subclavian vein were nearly filled with medullary secretion.

The œsophagus was much diminished in its caliber, which was occasioned by the pressure of the morbid lungs; and medullary tubercles projected into the œsophagus. Most of the absorbent glands in the thorax were converted into medullary matter; the abdominal viscera were healthy.

There were medullary tubercles between the internal and fibrous coat of the aorta; the vasa vasorum were very numerous and large, and organised lymph was deposited on the internal coat.

Several of the mesenteric glands were affected with the same disease.

- 2306 Lung, consolidated by inflammation and effusion of lymph. From a child 6 years of age; it died during the eruptive stage of measles.

- 2307 Lung with scrofulous tubercles, injected.

The bronchial and mesenteric glands were affected with the same disease, likewise the concatenated glands in the neck. From a patient 14 years of age.

- 2308 A portion of lung minutely injected, showing miliary tubercles. From a child 8 months old.

The lungs were solidified with miliary tubercles, the mesenteric glands converted into scrofulous masses, the mucous glands in the ileum and cæcum enlarged, and the mucous coat, in some portions, ulcerated; the concatenated glands in the neck were affected with scrofula. The mother died on the 6th day after parturition, of phthisis pulmonalis.

- 2309 Lung, solidified by miliary tubercles, coagulated lymph, and blood.

The patient had several attacks of hæmoptysis, and died of phthisis pulmonalis.

- 2310 Lung affected with medullary sarcoma.

- 2311 Lung affected with medullary tubera.

- 2312 Lung with large and small medullary tubera. The mesenteric glands were likewise affected with the same disease.

- 2313 A portion of lung affected with medullary sarcoma.

- 2314 Inferior portion of the trachea, with the bronchi; the mucous membrane inflamed.

- 2315 Trachea of a Slink Calf, the internal coat injected.

- 2316 A most singular specimen of accumulated tumors of various sizes in the anterior mediastinum, which

adhered very firmly to the external surface of the pleuræ. The bronchial glands were also converted into large masses of a similar character, and their growth had greatly diminished the caliber of the bronchi. A section of the morbid parts showed they were formed by an aggregation of various sized tumors, as dense in structure as carcinoma, and closely connected together by firm cellular media; in some portions of the diseased productions there were a great number of small deposits resembling miliary tubercles.

The pleuræ and substance of the lungs were highly inflamed, and the latter partly hepatised; the bronchial tubes were loaded with mucus and pus, and their lining inflamed. The pancreas was likewise affected with the disease, and the mucous coat of the ileum and of the large intestines was inflamed, thickened, and in some portions ulcerated.

See Section on Morbid Pancreas, and on Morbid Intestines.

2317 Pharynx, and a portion of œsophagus. There is a preternatural pouch in the former, about the size of a small apple, the opening into it is about equal to the area of a sixpence, and its edges are puckered.

The internal surface of the larynx and œsophagus is of a brownish color, but there is no sign of lesion or loss of continuity.

On examining the sac, the dilatation appeared to have been occasioned by the protrusion of the internal lining of the œsophagus between the fibres of the muscular coat, similar to those seen in the urinary bladder, occasioned by the presence of calculi, or where there had been retention of urine, or an enlarged prostate gland.

The gentleman from whom this specimen was taken, had suffered for several years great distress in deglutition, and frequent risks of suffocation; in one of the attacks he died suddenly, owing to an accumulation of food in the sac, which could not be swallowed or ejected.

In Dr. BAILLIE'S valuable Work on Morbid Anatomy, there is a description of a pouch in the pharynx, which was produced by swallowing a cherry stone,

also an engraving of the preparation. And a case of the kind is published in the 3rd Volume of the Medical Transactions and Inquiries, by Mr. LUDLOW, Surgeon, Bristol.

- 2318 A stricture of the œsophagus, about two inches from the cardiac orifice of the stomach, caused by schirrous tubercles between the external and muscular coat, which had produced mortification of the internal surface to a considerable extent above the strictured part.
The disease had existed nearly twelve months ; the patient died of inanition.
- 2319 A portion of ileum, dried and preserved in spirit of turpentine ; the valvulæ conniventes shown.
- 2320 Ileum, inflated, dried, and preserved in spirit of turpentine.
- 2321 Ileum, cæcum, appendix, and a portion of colon, minutely injected, dried, and preserved in spirit of turpentine ; the valves shown. From a child ; this is a very beautiful preparation.
- 2322 A portion of ileum, inverted, showing the villi.
- 2323 Ileum ; a portion of the coats highly inflamed, occasioned by a strangulated femoral hernia.
- 2324 Ileum ; the serous surface thickly coated with coagulated lymph.
- 2325 Ileum ; the internal coat thickened by coagulated lymph.
- 2326 Ileum ; with scrofulous tubercles beneath the serous coat. The lungs were nearly filled with miliary tubercles, and there were several large excavations. From a Boy, a native of Barbadoes ; the legs were affected with elephantiasis.
- 2327 Intestinum ileum, affected with cancerous and medullary tubercles, of small size, which had formed beneath the serous and muscular coats, and had extended through the latter into the cavity of the bowel.
- 2328 Ileum and cæcum of an adult. The mucous coat highly inflamed, and the mucous coat of the latter ulcerated. From a woman who died of phthisis pulmonalis.
- 2329 Cæcum, with a portion of the colon, affected with medullary sarcoma ; the mucous coat nearly destroyed by ulceration.

From a man, 45 years of age, who was admitted into the Sick Ward of Cripplegate Workhouse. He was the most miserable looking creature I ever beheld; his skin was affected with ichthyosis, which he said had "existed ever since his birth." See Section on Tegumentary Textures, No. 692.

There did not appear the least chance of succouring him beyond endeavouring to mitigate his sufferings. The symptoms were, almost constant pain in the bowels, particularly in the situation of the transverse arch of the colon. He was distressed with diarrhœa and tenesmus, and the evacuations were generally mixed with scybalæ, sometimes with pus and blood; these symptoms increased, he gradually sank, and died a month after his admission into the Workhouse.

Inspection. The thoracic viscera were healthy; the peritoneum was thickened with organised lymph. There were several large medullary tubera in the liver, mesentery, also beneath the serous surface of the intestines, but they were more abundant at the inferior part of the ileum, about the cæcum, and along the whole course of the colon. The mucous coat of the ileum was greatly inflamed, but not ulcerated. There was a considerable quantity of fœtid pus and coagulated blood in the cæcum, also in the principal portion of the colon. The sigmoid flexure and the rectum were loaded with hardened fæces. The cæcum, its appendix, and the colon to as far as the descending arch, had their mucous surface completely destroyed by ulceration; long shreds of this coat were alone discernible. This state of the mucous membrane had been occasioned by medullary tumors making their way from beneath the serous coat into the cavity of the intestine.

2330 A portion of colon. The internal coat is thickened, some of the follicles of the mucous glands are shown.

2331 Transverse arch of the colon; the mucous coat thickened, and some portions sphacelated. From a patient who died of typhus fever.

2332 A portion of intestinum rectum. All the coats greatly thickened, more especially the mucous surface. From a man who died of dysentery in

Calcutta ; the cæcum and colon were similarly affected.

- 2333 Ileum, cæcum, and appendix of a young Chimpansee ; in the same bottle there is the ileum and cæcum of a Baboon, without the appendix cæci.
- 2334 Ileum, cæcum, and the appendix vermiformis, inverted. From an Ourang-outang. The mucous surface is ulcerated ; the glandulæ aggregatæ shown. The lungs were affected with scrofulous tubercles and vomicæ, and the mesenteric glands were converted into large caseous masses.
- 2335 Intestine of a Monkey, with an hydatid beneath the serous coat.
- 2336 Intestine of an Ass, injected, and preserved in spirit of turpentine.
- 2337 A portion of liver, with biliary calculi in one of the ducts.
- 2338 The right lobe of the liver, converted into dense cysts by the growth of hydatids.

There is an opening of communication between the liver and the right portion of the diaphragm, which allowed some of the hydatids to protrude into one of the lungs. A portion of lung adheres firmly to the serous covering of the diaphragm, and a piece of omentum to the external surface of the liver ; these appearances are shown in the specimen, likewise one of the large hydatids.

From a man, 39 years of age ; he had been a Soldier for many years in the East India Company's Service. He was attacked with what was supposed to be acute hepatitis, a disease of frequent occurrence in that country. He was admitted into an Hospital, and was severely salivated, without the least benefit. He was discharged from the Hospital, and sent to England ; on his arrival he was admitted into Haslar Hospital, where he remained a considerable time, and was several times salivated, and was discharged from this Institution as incurable, and afterwards admitted into the Sick Ward of Cripple-gate Workhouse.

The patient complained of pain in the right shoulder, also of great tenderness in the right hypochondrium ; he was teased with a violent cough, and had a jaundiced hue.

The liver felt greatly enlarged, and fluctuation was detected in the abdomen. Various kinds of diuretics, &c. were prescribed, but the enlargement increased, and dyspnœa became very distressing. The nature of the case being interesting, I requested Drs. FARRE and BIRKBECK to see the poor fellow, they were of opinion that he could not long survive, and advised his being tapped. I performed the operation at about three inches below the umbilicus; only four quarts of fluid were drawn off, which was quite colorless. This afforded more relief than I anticipated, and to my astonishment all the unfavorable symptoms gradually subsided, and there was no further effusion of fluid, yet the liver felt enlarged.

He left the Workhouse, and went into the country. About a year and a half from this period he was again admitted; the liver felt greatly enlarged, he was troubled with cough, accompanied with great difficulty in breathing, and occasional attacks of hæmoptysis, which were very alarming. He was not emaciated; pulse 120 in a minute; the cough and dyspnœa became more distressing, the expectoration of pus with mucus profuse; he lost his voice, symptoms of hectic fever came on, and he expired.

The peritoneal surface of the liver was thickly coated with organised lymph, the right lobe presented irregular protuberances.

The left lobe of the liver was pale-colored, structure affected with cirrhosis.

The gall-bladder was extremely small, and contained only a glairy kind of fluid; the biliary ducts natural.

The spleen was considerably enlarged, its structure healthy, but the capsule was thickened with lymph. All the other abdominal viscera were healthy, except the mucous glands of the small intestines, which were greatly enlarged.

The kidneys were granulated; in the right there was a calculus, occupying the pelvis, and three of the infundibula; in the left there were three small calculi, and one in the urinary bladder.

The liver, diaphragm, and lungs were removed for

more minute inspection ; and the following were the morbid appearances which presented.

A portion of omentum adhered to the convex surface of the right lobe of the liver, and on detaching this it was seen to have closed a small aperture in the diseased portion of the liver.

On cutting open the right lobe of the liver, it was found to be formed into two dense cysts of considerable size, which communicated with each other, and they were filled with hydatids.

The cyst, at the superior part of the liver, was considerably larger than the one at the inferior portion.

The hydatids were removed, those found at the superior portion of the liver appeared natural, whilst those at the inferior part were dead and shrivelled.

In consequence of the serous surface of the right lobe of the liver having formed firm adhesions with that belonging to the diaphragm, caused by the growth of the hydatids, an opening of communication had been established between the liver, diaphragm, and thorax, and some of the hydatids had protruded into the substance of one of the lobes of the lung. The pleuræ adhered firmly on the right side, and the lung was nearly filled with dead hydatids and pus. The lung on the left side was loaded with sero-purulent infiltration, and the lining of the bronchial tubes, bronchi, and trachea, was highly inflamed.

This is a very singular specimen. The question is, whether the opening in the cyst of the liver, was made by the trocar, or by the growth of hydatids, which had caused ulceration of the peritoneal surface, and allowed the fluid of the hydatids to escape into the cavity of the abdomen ?

I think, in performing paracentesis, the liver was perforated, and the fluid of the hydatids was discharged, and that there was not any fluid in the abdomen at the time the operation was performed ; this opinion appears probable, from ascites not supervening, as is generally the consequence after tapping, in cases caused by diseased liver.

It is well known that hydatids in the human subject,

mostly contain a number of young ones, and by their growth the parent is lacerated and becomes shrivelled.

The young ones increasing in size cause the structure which contains them to be absorbed.

- 2339 Carcinoma of the liver.
- 2340 A portion of liver affected with fungoid tumors and granulated.
- 2341 A section of liver, with medullary sarcoma, beautifully injected.
- 2342 A splendid specimen of melanosis in the liver, injected. See Section on Diseased Lungs, Nos. 802, 803.
- 2343 A portion of spleen; the vessels unravelled, the capsule cartilaginous.
- 2344 A portion of spleen, showing scrofulous tubercles of various sizes beneath the serous coat.
- 2345 Spleen of a Monkey, showing large scrofulous tubercles.
- 2346 A kidney, injected, showing atrophy, also a cyst which was filled with chalk and serum. See Section on the Nervous System, No. 538.
- 2347 Uterus, with a polypus. From a woman, 59 years of age, who had borne several children, had enjoyed good health during the greater part of her life, and had ceased to menstruate several years; she became affected with uterine pains, accompanied with frequent hæmorrhage for nearly twelve months previous to her death.

Six months before her dissolution, the uterine hæmorrhage became so profuse as to affect her health; she was also troubled with a cough and difficulty in breathing; symptoms of a diseased liver came on, and the skin was sallow.

Several Physicians and Accoucheurs were consulted; at last she submitted to an examination per vaginam, when it was found there was a polypus in the uterus projecting into the vagina. She was advised to have it removed by ligature, to which the patient consented; a day was appointed to perform the operation; profuse uterine hæmorrhage came on the day after the consultation, which caused death.

There was nearly a quart of water in each side of the

chest, and the lungs were partly filled with serous infiltration.

The pericardium contained two ounces of fluid, the heart was small, its structure flaccid, the valves normal. All the abdominal viscera appeared blanched, and there was scarcely any blood in the vessels.

The liver was extremely small and pale colored, the structure soft; the gall-bladder and ducts were distended with bile.

The spleen and kidneys were healthy. The body and parietes of the uterus were much larger than natural, yet there were no signs of carcinoma or fungus hæmatodes. A polypus was found at the superior portion of the uterus, which seemed to have its origin from the cellular tissue of the muscular coat; it projected into the cavity of the uterus, and extended through the os uteri into the vagina. The os uteri was greatly dilated, so that there would not have been much difficulty in applying a ligature round the neck of the polypus. The Fallopian tube on the right side was obliterated, the ovarium converted into serous cysts; the left Fallopian tube was pervious.

A longitudinal section was made of the polypus, the pedicle was as dense in structure as the muscular substance of the uterus, but in that portion in the vagina there was a cyst filled with blood, and the external surface was thickly coated with coagulated blood; after this was removed, it presented the appearance of a vascular growth, which lead me to think the hæmorrhage had proceeded principally from this part.

The application of a ligature sometimes prevents the recurrence of this disease, but in the present case, the operation, considering the state of health of the patient, would probably have been unsuccessful.

The case is published in the 7th Volume of the Medico-Chirurgical Transactions.

I lately had an opportunity of seeing an uterus with a polypus, similar to the one just described. A ligature was applied, the patient died of peritonitis on the fourth day.

2348 The external and internal organs of generation, with

a portion of the bladder and urethra. From a woman (a virgin) 30 years of age, very diminutive in stature, occasioned by deformity of the spine and the bones of the thighs and legs, the effects of rachitis.

For nearly two years she experienced considerable pain near the neck of the bladder, and felt great difficulty in voiding urine: these symptoms gradually increased, retention of urine supervened, which rendered it necessary to employ a catheter.

Various modes of treatment were adopted to lessen the irritation of the bladder, but without effect, the urine was obliged to be drawn off twice, sometimes thrice a day, and although this was done in the most gentle manner, pain was felt, and there was considerable difficulty in passing the catheter, owing to the rigidity of the urethra; the urine was generally very turbid, and sometimes mixed with pus and uric acid.

About six months previous to her death, she was at different times afflicted with pneumonia, accompanied with violent palpitation of the heart; these symptoms were subdued by depletion and digitalis, but the last attack was more severe than any of the former, and accompanied with all the symptoms of cystitis. The pleuræ on both sides adhered firmly, some portions of the lungs were hepatised, and there were several excavations, but no signs of scrofulous tubercles. The bronchial tubes were loaded with pus and mucus.

The heart was extremely large, its structure healthy; the auricles and ventricles were distended with blood, probably occasioned by the congested state of the lungs. All the abdominal viscera and kidneys were healthy.

The bladder was very capacious, the muscular coat was extremely dense, the mucous surface thickly coated with organised lymph. The retention of urine was found to be produced by great condensation of the cellular tissue of the urethra, which had greatly diminished its caliber; this appearance is evident in the specimen.

The uterus was perfectly natural in structure, the ovaria showed signs of imperfect corpora lutea;

the hymen was present, but not so diaphanous as in a younger person.

I consider this an unique preparation.

- 2349 Nympha, which was extirpated. The structure dense, the skin presenting the appearance of very large verrucæ.
- 2350 Nymphæ; the right one is very large and dense in structure, and there is a large ulcerated opening in it. The parts were extirpated.
- 2351 Portion of a diseased mamma. The tumor was extremely large, the integuments covering it were partially destroyed near the nipple, and a fungoid growth projected.
A section of the morbid part showed it to consist of gelatiniform carcinoma and fungus hæmatodes.
- 2352 The anterior part of the neck, with the trachea, &c. From a man who had cut his throat. The anterior portion of the trachea was divided, likewise the inferior thyroid artery, which was secured by a ligature. He gradually sank from the loss of blood, and died on the 16th day from the time of inflicting the wound.
- 2353 A portion of skin, injected.
- 2354 A portion of skin, from the heel, showing the thickness of the cuticle and cutis, also the cellular tissue of the adipose surface.
- 2355 Cheirotheca. From a child.
- 2356 Podatheca. From a child.
- 2357 Two portions of skin, tattooed.
- 2358 Scalp of a child, minutely injected, and preserved in spirit of turpentine.
This is a beautiful specimen.
- 2359 Rupia prominens. From a girl, 20 years of age; nearly the whole of the skin was affected with this disease.
- 2360 Integuments, showing confluent small-pox, with purpura hæmorrhagica.
- 2361 Two portions of integument, showing variola; the cuticle reflected to exhibit the effects of the pustules on the cutis.
- 2362 Variola, the cuticle partially detached; the central depressions of the pustules are shown.
- 2363 A portion of skin, with an ulcerated surface, injected. From the subject last described.

- 2364 A portion of skin, showing the effects of gangrena sicca. See Section on Morbid Arteries and Veins, No. 456.
- 2365 Mortification of the skin.
- 2366 Toes of a woman; the integuments mortified from the effects of cold. See Section on Casts.
- 2367 Fibrous tumors of various sizes in the skin; there were similar growths beneath the serous coat of the Intestines. See Section on Morbid Intestines.
- 2368 Cancer scroti of considerable magnitude.
- 2369 A melanoid tumor in the integuments of the whole of the right side of the face. From a woman, 55 years of age; the disease had increased progressively for nearly two years; ultimately the brain became affected, which caused death.
- The membranes of the brain were inflamed and thickened, the substance soft, and the cerebrum in several portions showed signs of melanosis.
- The disease had protruded between the palpebræ, and a large tumor formed, which projected externally. The same morbid action had extended below the base of the inferior jaw-bone, and the submaxillary glands were converted into large melanoid tubera. The muscles of the eye were very flaccid and dark-colored, and the neurilema and nerves were similarly affected.
- There was pus between the retina and the choroid coat; both these membranes were thickened, and the lens opaque.
- The antrum Highmorianum was filled with pus, the internal surface inflamed and thickened.
- The morbid action had occasioned absorption of the lining of the cheek, and the periosteal covering of the principal part of the inferior maxilla had been destroyed as far as its articular process; the bone was necrosed and partially absorbed.
- 2370 Ear of a woman, injected.
- 2371 Integuments of the mouth and lips, also the internal lining injected. From an adult.
- 2372 Extremity of the nose of an adult. The integuments and membrana Schneideriana, injected, and marks of confluent variola shown.
- 2373 Extremity of the nose of a Lion, injected.
- 2374 Hand and a portion of the arm from a child, about the

6th month. The inner surface of the little finger, the ring and the middle finger are firmly united.

2375 Arm and leg of a fœtus, injected.

2376 A male fœtus, about the 6th month, injected with size and vermillion; the viscera shown. The Child only lived 14 days.

2377 Thoracic and abdominal viscera of a full grown fœtus.

2378 A large fibrous tumor, which was removed from the chest of a woman, who some years previously had the mamma extirpated. The disease did not recur after the last operation.

The tumor was not very vascular, its structure appeared in some degree similar to those tumors seen in the uterus, which are not considered of a malignant character.

2379 A cancerous tumor of considerable size, situated immediately beneath the sterno-cleido-mastoideus muscle on the left side of the neck. The morbid growth had occasioned an obliteration of the internal jugular vein, with a substance similar to that of the tumor.

The carotid artery, great sympathetic, and par vagum are shown in the preparation; also a portion of the sterno-cleido-mastoideus and the nervus accessorius. The concatenated glands in the neck were normal.

2380 Cast of a fungoid tumor, situated in the cellular tissue of the deltoid muscle.

FINIS.







